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MONTANA

PUBLIC INVESTMENT PLANNING PROCESS

1979 ANNUAL REPORT

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MONTANA PUBLIC INVESTMENT PLANNING PROCESS 1979

Submitted to the Old West Regional Commission
by the State of Montana

Prepared by the Governor's Office of Commerce
and Small Business Development
Office of the Coordinator for the Old West Regional Commission

July, 1979

State of Montana
Office of The Governor
Helena 59601

THOMAS L. JUDGE
GOVERNOR

July, 1979

Dear Montanan:

I am pleased to submit the 1979 Montana Public Investment Plan to the people of Montana and to the Old West Regional Commission. This document represents the combined effort of numerous Montanans, including private citizens, university personnel, local and state agency representatives as well as members of my staff.

Since this plan affects Montana, I both welcome and encourage continued discussion of the economic development goals, and proposed projects and programs, as we move toward implementing this investment strategy. A fundamental concern of this Administration has been and is to foster employment expansion at a rate sufficient to provide jobs for all Montanans. This Administration will continue to encourage "balanced development" in those areas that have under-utilized human and natural resource capacity or are desirous of growth. Under no circumstance will this effort be allowed to result in the promotion of economic activity that is either publicly unacceptable or environmentally unsound.

Since many of the changes which affect the future of Montana's economy are the result of external events (national, international, climatic, etc.) over which the state has little control, any development program must be based on a realistic view of the roles of state government and of the Old West Regional Commission itself. Today, the prudent man, business, community, or government must anticipate the future and adapt to changing conditions. In state government, we must continuously monitor potential economic uncertainty; we must prepare ourselves and move with the course of the future in order to succeed.

I wish to again emphasize the importance of the Regional Commissions in improving federal and state cooperation. I trust that this planning document will well serve that purpose.

Sincerely,

Thomas L. Judge

THOMAS L. JUDGE
Governor

PREFACE

No state can stand still. Change, either positive or negative, is inevitable. It is because of this inevitability of change that citizens must make their policy direction understood. The choice is basic: to lead change or to follow it.

Montanans have shown conclusively that they desire to lead change. As stated in the Montana constitution, "all government of right originates with the people, is founded upon their will only, and is instituted solely for the good of the whole." The future of Montana belongs to the people: state government has the responsibility to help prepare a future which will enhance the health, welfare, safety, and economic security of all Montanans.

Leading change is the desired end . . . public investment planning represents a single element of the means.

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ACKNOWLEDGEMENTS

Special recognition is extended to the Montana representatives of the Old West Regional Commission Advisory Committees for their cooperation and assistance in preparing this report . . . to John Lopach, Director of the Governor's Office of Commerce and Small Business Development; to Professor Maxine Johnson, Director of the Montana Bureau of Business and Economic Research; and to John Fitzpatrick, Deputy Director of the Office of Budget and Program Planning, for their editorial review and comments.

Recognition is also extended to Western Analysis, Inc., for economic research and document preparation, to Joyce Andrus for typing the final document, and to the Publications Bureau of the Montana Department of Natural Resources and Conservation for typesetting, graphic illustration and layout and design.

INTRODUCTION

PURPOSE

The Old West Regional Commission (OWRC), comprised of the states of Montana, Nebraska, North and South Dakota, and Wyoming, was established under Title V of the Public Works and Economic Development Act of 1965 to promote long-range economic planning and acceptable forms of growth throughout Federal-State public investments. The Commission provides member states with a concerted and cooperative means of addressing common economic issues and provides a mechanism for influencing federal programs and policies, taking into account specific regional differences and perspectives.

The purpose of the 1979 Montana Public Investment Plan is to analyze major economic challenges facing Montana, articulate economic goals and objectives of the people of Montana, and develop public investment strategies and programs which will benefit Montanans, as well as the residents of the Old West Region. This document, submitted in compliance with the Public Investment Grant regulations of the Commission, represents a conscientious effort on the part of the State of Montana to continue to improve state economic policy, programs, and projects, and to enhance the multi-state economic planning process of the OWRC.

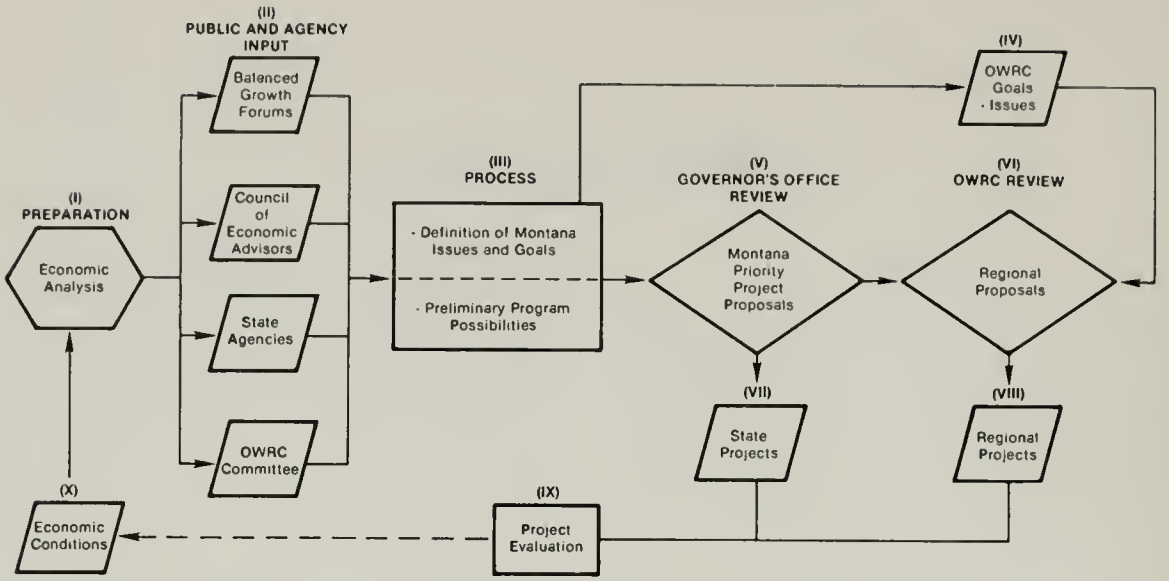
The plan is designed to effectively focus the expenditure of OWRC funds in a manner consistent with the role and scope of the Commission and to provide information, analysis, and background reviews of major Montana issues.

APPROACH

Preparation, goals, background information, and suggestions included in the plan were derived from numerous sources, as shown in Figure 1. Public input and overall participation were brought about in several ways. First, and most importantly, the Governor's Balanced Growth Forums, conducted during 1978, were used to categorize, but not necessarily quantify, major economic problems and goals of the people of the state. Twelve public forums were held throughout Montana conducted either by the Governor or Lieutenant Governor with agency staff present. These forums resulted in open debate regarding the role of the state in economic, human service, or environmental affairs. Second, input from the Governor's Council of Economic Advisors was helpful in the determination of workable economic goals for the plan. Since its creation in 1977, the Council has evaluated numerous economic issues, recommended goals and policies, and surveyed various aspects of Montana's private economy. Council representation is broad-based, including agricultural, industrial, and environmental viewpoints.

State agency input was generated in two ways. First, task force recommendations and goals provided by the Balanced Growth Program were incorporated, when appropriate. The Balanced Growth Program represents an ongoing effort by the Judge Administration to make state government more responsive to economic and environmental issues, more efficient, and more consistent with public desires. During the summer of 1978, agency directors and other high ranking staff were charged with the responsibility of reviewing and analyzing significant problems (economic, social, environmental, and regulatory) confronting Montana and in suggesting mechanisms within the scope of state government which could result in either mitigating or resolving key issues. Second, during the formulation of the plan, the Montana representatives of the OWRC Advisory Committees (agriculture, natural resources, industrial development, etc.) were asked to provide suggestions and comments regarding goals and investment projects which should be considered for the upcoming year. These projects were reviewed by the Governor and his staff to ensure consistency with the most pressing needs of the state. The most significant proposals are explained and justified in later sections of the plan.

FIGURE 1 MONTANA PUBLIC INVESTMENT PLANNING PROCESS



In order to place the economic goals, objectives, and project recommendations in the context of future growth potentials, an analysis of Montana's economy was conducted, emphasizing major trends and current issues for key sectors of the economy. Long-range employment and population projections were developed at the state and county level. In addition to providing an economic perspective, these data and forecasts were used to help determine goals and priorities for the proposed expenditure of OWRC funds.

ORGANIZATION

This document contains the following sections:

- An analysis of Montana economy;
- Montana's basic economic sectors;
- Employment and population projections to 1990;
- Montana's economic goals and objectives;
- Proposed regional and state projects; and
- Summary and future planning implications.

The first three sections provide information regarding Montana's economic performance; past, present, and projected. Major issues confronting Montana's key economic sectors are discussed in the fourth section. The definition of these issues is a result of the analysis described in the preceding sections. The fifth section presents Montana's investment strategy for future regional and state projects based on these identified needs. The last section summarizes the role and scope of the OWRC and suggests various improvements which have the potential for making the OWRC more responsive to significant economic and social challenges within the region.

MONTANA'S ECONOMY

AN HISTORICAL PERSPECTIVE

Most of Montana — east of the Rocky Mountains — was part of the 1803 Louisiana Purchase. Heavy in-migration to Montana did not occur until the discovery of gold in the early 1860s. Coinciding with the "gold-rush" days, Montana Territory was created in 1864 to provide accessible government for the early populace.

Within a decade, many of the great placer camps began to falter and the mining emphasis shifted to silver and copper production, underground methods, corporate organization, and a more orderly business environment. As a result of these innovations, other Montana industries began to show significant gains. Agricultural development was hastened in response to high prices for food in mining camps and military installations, at least in part related to the cost of transporting food into Montana. For similar reasons, the wood products industry expanded to meet the growing need for mine and railroad timbers and lumber to build homes.

As the national demand for the products of mining and agricultural enterprises continued to grow — very likely the direct result of the railroads — Montana was to slowly become known as a major exporter of raw materials and products. Population continued to swell through increased homestead and mining activity. And, in 1889, Montana was admitted to the Union as the forty-first state.

Although known as the Treasure State, life was clearly far more difficult during this era than we can probably imagine today; vagarious weather, small land-holdings, and hazardous working conditions no doubt left many newcomers worse off than when they left the East. Hard times were also felt in Montana cities.

By the early 1900s, Butte and Helena had population levels of nearly 60,000 and 20,000 respectively. Butte developed a coterie of millionaires and Helena had the reputation of having more millionaires per capita than any city in the world. This was to change since the future of Butte was tied to copper and Helena's to gold. Gold reserves were gradually depleted and Helena's population declined for several decades. Butte's growth cycle, perhaps not yet ended, was almost entirely related to copper demand and more efficient mining techniques requiring fewer and fewer workers. At one point during this era, the Anaconda Company employed more than 13,000 people, amounting to about three-fifths of the wage earners in the entire state. The technology of the day was to mark one of the darker periods of the state's history — an image which is still remembered today. These early phases of development abound in examples of rapid growth, decline, and economic/environmental disruption.

Montana, now ninety years a state, is still new in point of settlement and organization, and its principal economic role continues to be the specialized one of providing raw materials for the national marketplace. As a result of the state's natural resource base, and its distance from population centers, the economy has been largely resource- rather than market-oriented; the importance of manufacturing products for final consumption has been relatively low.

Even though most natural resource industries are slow growth industries by national standards, Montana's recent economic performance has been favorable. Employment growth since 1970 has been sufficient to more than offset the significant outmigration of Montanans which plagued the state during the 1950s and 1960s. During that period of Montana's economic development, many young and talented individuals were forced to leave the state to search for employment opportunities which Montana could not offer. Today, however, the situation is different; people are moving to Montana, not leaving. And, the primary reason for this reversal of population trends has been more rapid employment growth. During this decade, employment growth has been conservatively double that which occurred in the 1960s.

Although nearly all of the recent employment expansion, and a large share of the income increase, have been found in the service and trade sectors, Montana is still heavily reliant on the resource-based industries. Without any doubt, these industries (agriculture, mining, and wood products) have provided the basis for the long-term development of the state, and in all likelihood, it is these industries which will determine the future of Montana. Concentration in these industries has not been accidental, but rather the result of natural market forces.

EMPLOYMENT

The most regularly gathered and reliable data concerning Montana's economy are employment statistics. Changes in employment levels and in the relative importance of industries in employment terms give a good idea of the direction of Montana's economy.

Total employment has grown much faster in the 1970s than during the previous decade. In the 1960s, Montana's growth was about one-half the national rate. But, since 1970, the state's employment gain has significantly outpaced the national increase. This is clearly a healthy sign for Montana, a long-awaited change.

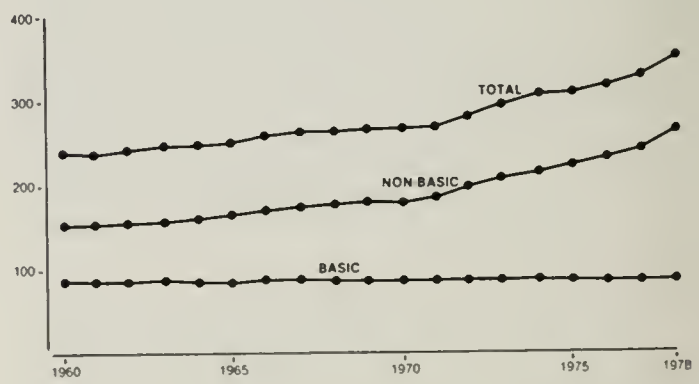
The recent growth, however, has not been evenly spread across economic sectors. Nearly all of the increases have been experienced in trade- and service-related expansion. In order to analyze this change in emphasis, it is often useful to divide industries into "basic" and "non-basic" categories. Basic jobs bring money into the region, generally through exports. On the other hand, non-basic jobs are assumed to draw their livelihood from the income produced by the basic employers. Table 1 and Figure 2 show this relative shift in the composition of employment since 1960.

Overall basic employment has been remarkably stable in Montana and throughout the nation for the last several decades. Substantive state job losses have occurred in agriculture, metal mining, and primary metal processing, while other basic sectors have expanded employment, most notably coal, oil and gas, and wood products. Simply, the gains and losses have averaged out, resulting in a near constant level. It should be noted, however, that basic employment would have declined slightly had it not been for growth in federal government, a sector which is included in the basic category primarily because Montana has numerous federal employees engaged in natural resource management.

The non-basic category presently employs far more workers than the basic group of industries, by a factor of approximately two and one half to one. Although non-basic growth has been much faster in Montana than the national average since 1970, the state still has relatively fewer service and trade-related jobs than the U.S. norm, a common occurrence for rural states. But the state is rapidly catching up, as evidenced by the addition of new retail stores, restaurants, and services. Possibly, Montana's surge of non-basic development is taking place all at once. That is, until 1970 this type of growth was considerably slower here than elsewhere, but has since accelerated to nearly double the national figure.

This uneven growth — basic versus non-basic — may be puzzling to those who believe that service and trade jobs can come only as a result of basic industrial development. It is important to remember that at the turn of the century, the majority of the national labor force was employed in some form of primary production, i.e., food, lumber, metals, etc. These industries have experienced rapid productivity gains, requiring relatively fewer production workers for an increasing amount of physical or real dollar output. Also, overall income has increased, both in Montana and nationally, bidding up the demand for non-basic activity. As a related phenomenon, the state and nation became increasingly urbanized.

FIGURE 2
CHANGE IN EMPLOYMENT COMPOSITION
(Thousands)



SOURCE. Montana Department of Labor and Industry, Employment Security Division

TABLE 1
EMPLOYMENT IN SELECTED MONTANA INDUSTRIES
(Thousands of Persons)

INDUSTRY	1960	1965	1970	1971	1972	1973	1974	1975	1976	1977	1978	Change 1960-70	Change 1970-78
BASIC													
Agriculture	39.0	35.2	36.1	35.0	33.1	36.3	38.8	34.8	33.4	34.5	33.0	-2.9	-3.1
Mining	7.4	7.5	6.6	5.4	6.3	6.5	7.1	6.4	6.1	6.1	6.9	-0.8	0.3
Metal	4.5	4.6	4.0	2.9	3.7	3.8	4.0	3.1	2.4	2.0	2.1	-0.5	-1.9
Coal	n/a	n/a	n/a	0.2	0.3	0.3	0.4	0.7	0.8	0.9	1.2	n/a	1.2
Oil and Gas	2.2	1.8	1.8	1.6	1.6	1.6	1.8	1.8	2.1	2.6	2.8	-0.4	1.0
Other Mining	0.7	1.1	0.8	0.7	0.7	0.8	0.9	0.8	0.8	0.6	0.8	0.1	0.0
Manufacturing	20.4	22.2	23.9	24.0	24.5	24.8	24.5	22.1	23.7	24.2	26.2	3.5	2.3
Wood Products	7.3	8.6	8.2	8.7	9.2	9.8	9.5	8.1	9.1	9.3	10.7	0.9	2.5
Primary Metals	3.8	3.6	4.7	4.1	3.9	3.4	3.4	3.3	3.3	3.2	3.2	0.9	-1.5
Food Products	4.3	4.3	4.3	4.2	4.2	4.3	4.1	3.5	3.7	4.0	4.0	0.0	-0.3
Other Manufacturing	5.0	5.7	6.7	7.0	7.2	7.3	7.5	7.2	7.6	7.7	8.3	1.7	1.6
Railroad	9.0	7.5	6.6	6.4	6.4	6.3	6.5	6.1	6.1	6.3	6.9	-2.4	0.3
Federal Government, excluding Military	9.9	12.1	11.9	11.9	12.3	12.2	12.9	14.2	13.7	14.1	13.5	2.0	1.6
Total Basic	**85.7**	**84.5**	**85.1**	**82.7**	**82.6**	**86.1**	**89.8**	**83.6**	**83.0**	**85.2**	**86.5**	**-0.6**	**1.4**
NON-BASIC													
Transportation, Communications and Utilities, excluding Railroad	10.0	10.0	10.8	11.3	11.5	12.4	13.0	12.9	13.4	13.9	14.7	0.8	3.9
Construction	11.0	12.0	11.0	11.7	11.4	13.0	13.5	12.1	13.8	15.6	16.3	0.0	5.3
Trade	40.5	42.9	48.3	50.1	53.5	56.3	58.8	59.1	63.7	66.3	71.3	7.8	23.0
Services*	30.0	33.3	41.8	43.8	46.3	49.8	52.4	54.5	58.6	60.7	64.1	11.8	22.3
State and Local Government	28.6	33.8	40.7	42.5	43.1	43.2	45.3	50.7	52.0	56.5	57.7	12.1	17.0
Non-Farm Proprietors and Other	30.2	30.0	23.7	22.9	28.9	27.8	29.1	29.1	27.5	24.8	37.4	-6.5	13.7
Total Non-Basic	**150.3**	**162.0**	**176.3**	**182.3**	**194.7**	**202.5**	**212.1**	**218.4**	**229.0**	**237.8**	**261.5**	**26.0**	**85.2**
TOTAL	**236.0**	**246.5**	**261.4**	**265.0**	**277.3**	**288.6**	**301.9**	**302.**	**312.0**	**323.0**	**348.0**	**25.4**	**86.8**

SOURCE: Montana Department of Labor and Industry, Employment Security Division
*NOTE: Includes Employment in Finance, Insurance, and Real Estate

More recently, there has been a large increase in the labor force as a result of a change in the age structure of the population. The "baby boom" has resulted in more people entering the labor force than ever before. This age effect, coupled with the fact that more women are working outside the home, has greatly expanded the number of individuals seeking employment. The basic industries, where productivity has grown the most, have not been able to provide employment for these new workers. The service and trade sectors have not experienced this rapid growth in productivity and have largely absorbed these individuals. Simultaneously, consumption of the output of the service and trade sectors has grown. Public and private sector services are increasingly substituted for activities once provided in the home. While it is true that many of the positions offered in these sectors have been part-time, even after adjustment to full-time equivalents the rate of increase in employment has been great.

Regardless of the reason, purchases by both businesses and final consumers over time reflect a significant increase in "nonmaterial" consumption and employment. Furthermore, it is likely that this pattern of growth will hold in the future. Specifically, this means that it is possible for an economy to grow, be it local, state, or national, with a constant basic employment level. This does not detract from the fact that the basic sectors are vital to the economic health of an area. It merely reflects significant changes in our society's underlying structure. Clearly, a change in basic income or employment significantly affects an area, but not as much as the commonly accepted multiplier concept would suggest.

UNEMPLOYMENT

The unemployment rate is probably the most frequently used statistic in economic discussions and perhaps the most misunderstood. Its calculation depends on two factors: the level of employment and the total size of the labor force. Data for the former are gathered regularly and can be accurately determined. But the "size of the labor force" is difficult even to define and its calculation requires many assumptions; i.e., who is actively seeking employment? The estimation methods change frequently and differ between states; thus, comparisons over time and with national figures are made with some risk.

Since 1970, national unemployment has averaged about six percent of the labor force. The average rate in Montana has been slightly higher (6.6%) or slightly lower (5.4%) depending upon the estimation procedures used. However, given the relative error of estimation methods, it is "reasonably" safe to assume that unemployment in the state is generally very close to the national average.

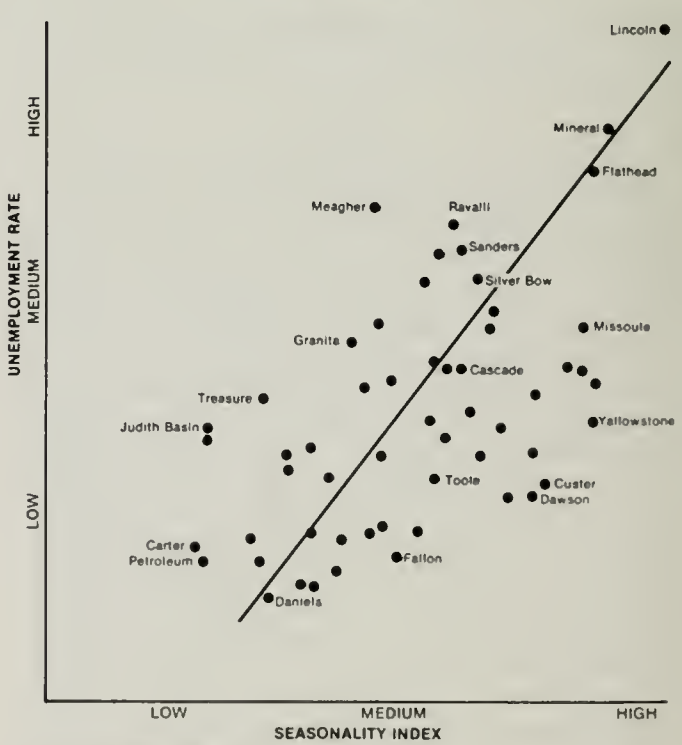
It is important to note that the unemployment rate in the state and throughout the nation has increased in the last several decades. The general rise has been primarily the result of the tremendous growth in the labor force since the mid 1960s. As mentioned earlier, the "baby boom" has resulted in more people entering the labor force than ever before. This effect, coupled with the fact that more women are seeking employment outside the home, has greatly expanded the labor force. The basic industries, where productivity has grown the most, have not been able to provide employment for these new workers. And, as a consequence of increasing income and a rapidly expanding supply of workers, the service and trade sectors have absorbed most, but not all of these new entrants into the labor force. Therefore, total employment growth has been somewhat less than the increase in the number of individuals seeking jobs, resulting in a long-term increase in the overall unemployment rate. But, as the impact of the "baby boom" fades, unemployment rates should improve.

Although Montana's unemployment rate has generally followed the national average, there are substantial variations in the rate at the county level. For example, during 1975, unemployment rates ranged from a low of 2.5 percent in Daniels County to a high of 16.6 percent in Lincoln County — following the Libby Dam completion.

Generally, unemployment has been much higher in western Montana than throughout the rest of the state, particularly the eastern agricultural areas. Furthermore, the imbalance has existed for years. This persistent difference has apparently been the result of several factors: seasonality, and employment and population change.

Seasonality. Employment in western Montana is subject to large seasonal variations — fluctuations in employment over the course of a year due mostly to climate and industrial mix. Large seasonal variations in employment mean that substantial numbers of workers will be unemployed during part of the year; this results in a high annual rate of unemployment. Outdoor industries such as wood products — especially logging — are affected by severe winter weather and spring breakups; tourist-related activities, although increasing in the winter season, still are concentrated in the summer months as a result of both custom and climate. The importance of these two seasonal industries — wood products and tourism — in western Montana contributes to the area's high unemployment rate. Figure 3 illustrates the relationship between seasonality of employment and annual rates of unemployment, and clearly shows the tendency toward higher unemployment rates in western Montana counties.

FIGURE 3 UNEMPLOYMENT AND SEASONALITY OF EMPLOYMENT



*SOURCE: Western Analysis, Inc.

Employment and Population Change. The data indicate, paradoxically, that counties with lower than average employment growth generally have low unemployment rates. Also, areas with high employment growth have higher than average unemployment rates.

The data also show that areas with rapid population growth have high unemployment. Conversely, counties with slow population growth or declining population have lower than average unemployment.

No one variable fully explains, for example, why Montana's western counties have unemployment rates much higher than its eastern counties. However, all three variables (population growth, employment growth, and seasonality) in combination explain much of the variation. There are no laws in economics, only general tendencies. In this instance, they are:

(I) If any area's population growth exceeds employment growth, unemployment will be generally high. This only makes sense; however, it is interesting to note that employment growth is usually higher in areas of relatively high unemployment and that unemployment is lower in areas with slow employment growth. Areas of high employment growth also have high population growth which forces unemployment upward. Areas with slow employment growth usually have out-migration which tends to reduce the unemployment rate. These tendencies hold true throughout the nation as well as within Montana.

(II) Much of the county to county variation in unemployment appears to be the result of industrial mix. This factor is as important as either population or employment growth. If an area has a high concentration of seasonal industries, as is the case in western Montana, unemployment will be higher than an area with less seasonal influence.

Implications. Variations in unemployment rates may not always be related to economic performance but rather to industrial composition.

Increasing employment levels may not reduce unemployment but may, in fact, lead to higher unemployment, if high population growth through in-migration occurs. That is, population growth may not be in phase with employment change if a significant number of individuals move to an area hoping to find work because it appears to be growing rapidly. Flathead County and Alaska provide good examples of this tendency.

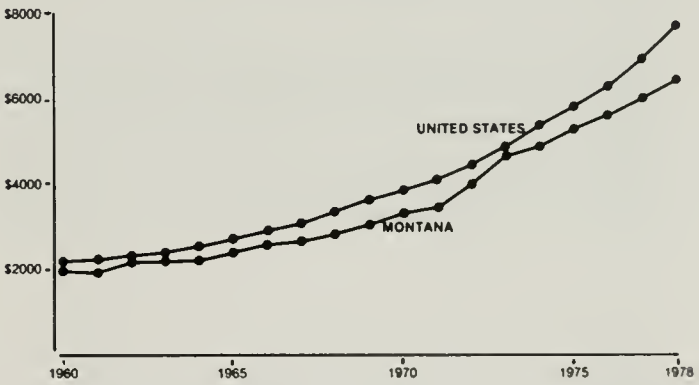
Employment stability may be improved through diversification or by fostering industries which employ the unemployed during the off-season, but only so long as population growth remains relatively stable. A careful balance between employment and population growth is necessary to either reduce or stabilize the unemployment rate.

INCOME

Income data serve as another useful indicator of economic well-being. Of course, the overall welfare of the state's residents is determined as well by many intangible benefits which are equally important but no one would suggest that intangible benefits buy groceries.

Montana per capita income has grown at approximately the national rate; sometimes faster, sometimes slower. However, since 1960, Montana per capita income has been roughly 12 percent lower than the national level. This consistent difference is illustrated in Figure 4.

FIGURE 4
PER CAPITA INCOME IN MONTANA AND THE U.S.
(Current Dollars)



SOURCE: United States Department of Commerce, Bureau of Economic Analysis

The periodic ups and downs in Montana per capita income have, for the most part, been related to variations in farm income. The comparatively small variations in the national trend have been the result of business cycles, but agricultural states such as Montana are relatively insensitive to national cycles. Certainly, some effects are felt (e.g. in the wood products and metal mining sectors), but not to the degree experienced by the most industrialized states.

In terms of the long-run trend, much of the absolute increase in income, both here and nationally, has been the result of inflation. For example, Montana's per capita income increased 230 percent since 1960, while the real growth in purchasing power (per capita) grew by a more modest amount, 49 percent. And, in Montana, real per capita income has actually declined marginally since 1973, the state's best agricultural year. Although farm receipts this year will be up, price increases for agricultural producers, manufacturers, and consumers are increasing at an unprecedented rate. Inflation and an expected downturn in national business activity will likely result in a slight decline in real income for Montanans for the next year.

Much of the historical upward drift in prices has been the result of factors mentioned previously: slower productivity gains in non-basic activity and rapid labor force expansion. Throughout the 1970s, nominal increases in income through expanded employment have often outpaced real output levels, resulting in higher prices and declining purchasing power. Assuming that federal fiscal and monetary actions become more conservative and that the national declines in relative investment reverse, inflation should dramatically slow in the 1980s as the effects of the "baby boom" play out; i.e., Montana will experience a slower labor force expansion.

Aside from a few erratic changes, the result of exceptionally good or poor agricultural years, the composition of Montana income has essentially followed the national trend, with total non-basic income growing more than basic. Of course, this is not surprising because nearly all of the employment growth has occurred in the non-basic sectors.

Within the last five years, approximately 70 percent of the national (industrial) income growth was found in the non-basic category. In Montana, the figure was somewhat higher, reflecting proportionally faster non-basic employment growth. Although farm income has declined, the other basic income producing sectors such as mining and manufacturing have experienced increases comparable to the nationai growth pattern. Presumably, Montana's overall basic income growth will improve as farm receipts continue to recover from the devastating 1976-77 downturn.

Table 2 illustrates the principal sources of income in Montana and the nation. Agricultural enterprises are clearly more important to the Montana economy than in most states. In fact, only North and South Dakota derive a higher percentage of their income from this source.

TABLE 2
INCOME BY INDUSTRY
PERCENT OF TOTAL
(1972-77 Average)

SECTOR	UNITED STATES	MONTANA
Farm	3.4%	13.5%
Mining	1.3	3.6
Construction	6.1	7.5
Manufacturing	26.0	10.0
Transportation/Utilities	7.4	9.6
Trade	16.8	17.4
Finance	5.4	3.8
Services	16.0	13.3
Government	17.6	21.3
TOTAL	**100.0%**	**100.0%**

SOURCE: United States Department of Commerce, Bureau of Economic Analysis

Manufacturing in Montana generates a much smaller proportion of overall income than the national average, while certain other non-basic sectors (trade, services, construction, transportation, and government) accounts for approximately 70 percent of total income both in Montana and nationwide.*

Montana does have somewhat more government income and employment than is generally the case. However, much of this concentration results from military employment and from federal land management agencies. Part of the explanation is also related to Montana's large land area and low population base. Interestingly, the relative cost (total taxes as a percent of income) of government in Montana is about fifteen percent less than the national average.

One of the more frequently asked questions concerning Montana's economy is: Why is per capita income 12 percent lower than the national norm? There are no definitive explanations, but several possibilities exist.

—Employment in nearly all Montana industries is more seasonal than their national counterparts. Montana's employment base is also concentrated in industries which are more seasonal than their national counterparts. In other words, many individuals may not work fulltime in Montana, thus reducing the per capita income level. This effect may account for roughly 7 percent of the income discrepancy.

*Strictly speaking, it may be appropriate to adjust out rail, heavy construction, federal government, and tourism-related income from the general "non-basic" sectors noted above. If this is done, Montana's non-basic percentage is less than the 70% mentioned above.

— One commonly advanced explanation for Montana's lower per capita income level is that the state's economy has a larger than normal concentration of low paying industries. This does not appear to be true; in fact, most Montana wage rates are somewhat above the national norm. And, since average weekly hours worked per employed person are comparable to the national level, the seasonality hypothesis is again confirmed. In other words, since Montana wages are slightly higher than the national level and work weeks (hours) are similar, a substantive part of the work force must not be employed year-round.

— Another factor which may contribute to Montana's lower per capita income is the state's population growth. With income rising at the national rate and population growing faster than the national average, changes in per capita levels in Montana will be less than the national increase.

— The cost of living may be lower in Montana than nationwide. Although no state-specific income deflators exist, regional deflators suggest that prices are slightly lower in the western region of the country. If this is true, the "real" difference between Montana and the nation would be less than 12 percent.

— The costs of crime, pollution, congestion, and commuter travel appear to be lower in Montana. Also, nearly all Montanans live within areas which other Americans are willing to spend literally days and hundreds of dollars to visit. Even though these sorts of influences are not accounted for in standard income or cost of living indices, there is a direct and substantial effect on real income.

POPULATION

Montana's population, like employment, has shown different behavior in the 1970s than in the previous decade, when economic growth was slow and many residents left the state to find work. Since 1970, the population flow has changed direction and approximately 30,000 individuals have migrated to Montana from other parts of the country. This immigration represents about 40 percent of the overall population increase since 1970, the other 60 percent resulting from natural growth, i.e., births exceeding deaths.

Although Montana's rate of increase has been significantly faster than the national norm (double), in point of comparison it has been 35 percent slower than in the Rocky Mountain region. In addition, it is suspected that the most recent estimate (1978) for Montana may be somewhat overstated. This pattern of steady population increase is shown in Figure 5.

FIGURE 5
MONTANA POPULATION ESTIMATES
(Thousands)

SOURCE: United States Bureau of the Census

Much of the population growth, however, has taken place in relatively few areas. For example, Flathead, Gallatin, Lewis and Clark, Missoula, and Yellowstone Counties account for nearly two-thirds of the total state gain. Out-migration continues to be a problem for Great Falls, Anaconda, and Butte, as well as for many rural areas within Montana. Moreover, out-migration is usually composed of the young and talented, a community's most valuable asset.

To return to a common theme — the "baby boom" — the post-war babies are now young adults with their own families. Since 1970, the number of new Montana households has grown by approximately 56,000, a 26 percent increase. National increases were more on the order of 20 percent.

The aggregate economic and social impact of age structure changes has been significant. In addition to an increased demand for new homes, a host of other consumer products have been targeted at specific age groups (recreational forms and facilities, quick-food restaurants, clothing styles, etc.). The effects extend to the expansion of credit to school enrollment cycles as well as to the composition and growth of the labor force mentioned earlier.

SUMMARY

The reconciliation between income, employment, unemployment and population in any region is extremely difficult. It is extremely important, nevertheless, that we explore and understand the relationships between these indicators of relative economic health. For instance, increasing employment levels is no guarantee of reduced unemployment rates, because increases in employment opportunities can be more than offset by changes in the labor force, i.e., the number of people actively seeking employment. Typically, regions which have rapid employment (or population) growth also have relatively high unemployment rates as a result of greater competition for jobs. This increased competition may result from either in-migration or higher participation rates within the region.

The population effects of employment increases are equally difficult to analyze. The population change resulting from growth in the non-basic sector is generally much lower than that resulting from an increase in basic activity. In Montana, many of the jobs within the non-basic sectors have been filled by women and, as a result, migration effects have been negligible. It is not surprising, then, that employment is currently growing much faster than population. Even though many of these new jobs have been part-time and low-paying, non-basic growth has resulted in substantial increases in total income.

The relationship between population and income is very definitely a two-way road. The out-migration of the fifties and sixties kept per capita income levels for the remaining population higher than they would have been in the absence of migration. Of course, this migration was not without cost. Many young people who were eager to work in Montana went shopping for jobs elsewhere.

The situation is now reversed and census estimates, as well as several other sources, indicate a fairly high level of in-migration. Ironically, many of the individuals appear to be moving into areas of the state where unemployment is quite high.

COMPARATIVE COSTS OF MANUFACTURING

INTRODUCTION

It is difficult to determine with precision the exact reasons why a particular business develops at one location as opposed to another. Economic theory focuses attention on major cost components including labor, transportation, utility rates, taxes, etc. While such factors are important, there are many other considerations which cannot be quantified. For example, nearly all industries, including the major national corporations, were at one time the result of one individual's efforts. The industries grew where the entrepreneur was, regardless of comparative costs.

Another important fact which is often overlooked is that the nation did not develop in a uniform manner. Early settlement and manufacturing patterns still play a major role in determining the present shifts in manufacturing activity. That is, many industries which are seeking new locations are constrained to locate in areas which are already developed. They are frequently linked to an already existent industrial complex through technology, input requirements, financial institutions, etc.

It should also be kept in mind that the principal source of manufacturing growth lies on the birth of new enterprises and the expansion of existing industries, rather than in attracting branch plants of multi-plant operations.

LABOR COSTS

Average manufacturing wages in Montana (See Table 3) are higher than the national norm and much higher than the prime manufacturing growth area, the southern states.* Manufacturing employment in Montana is heavily concentrated in capital intense industries such as smelting, refining, lumber and paper mills, etc. These are highly productive industries and are also relatively high paying, thus driving the average manufacturing wage up. While some may contend that union strength results in Montana's high manufacturing wages, comparisons of wage rates in the same industries nationally refute this claim. In fact, Montana is slightly less unionized than the national norm.

Another reason for the high wages relates to the relative absence of light industry in Montana, which generally pays somewhat lower wages. Again, this inflates the state's average. As a result, comparisons of average wages with other states are made with some risk since wage rates significantly vary among manufacturing industries and the industry mix varies among states.

UTILITIES

Electrical and gas rates exhibit far more variation than labor costs. Montana presently is a low utility rate area, particularly for electricity. As more thermal (high cost) units are added to the less expensive hydroelectric base, however, the rates will rise. In addition, Bonneville Power rates for western Montana are expected to increase within the next few years as revised pricing policies are adopted. It is still likely that Montana will have a slight cost advantage in this area in the longer term, but the advantage will not be as significant as it is today. However, utility rates are usually not a major cost item for manufacturing firms.

TAXES

The effect of taxation on manufacturing growth remains a hotly debated consideration, even though overall business taxes usually constitute less than two percent of total production cost at the national level. While taxes paid per $100 of profits vary substantially from state to state, the relative cost of taxes remains relatively low, probably less than a one percent variation between states. A recent study by the Academy for Contemporary Problems, Columbus, Ohio, indicates that total business taxes are generally about 30 percent lower than the national

*Total private wage rates in Montana are currently four percent higher than the national average. Mining is 16 percent higher, construction 32 percent higher, transportation/communications/utilities two percent lower, trade 17 percent lower, and services 19 percent lower Source: Bureau of Labor Statistics

TABLE 3
STATE MANUFACTURING COST COMPARISON INDEX VALUES
(1974)

	Manufacturing Wage Rate	Electricity	Gas	Taxes	Transportation
Alabama	87	74	71	102	74
Arkansas	77	91	57	102	78
California	109	100	76	98	177
Colorado	106	93	53	85	116
Georgia	82	94	79	98	74
Idaho	102	46	82	98	158
Illinois	113	101	95	88	71
MONTANA	**114**	**36**	**64**	**86**	**145**
Nevada	112	76	78	114	162
New Jersey	106	152	122	68	90
New York	105	118	137	117	90
North Dakota	89	144	74	82	106
Oklahoma	92	73	55	93	88
Oregon	116	32	95	87	194
Pennsylvania	106	121	109	110	80
South Dakota	88	116	61	71	98
Texas	94	70	59	81	96
Utah	91	93	49	110	143
Washington	121	23	83	109	193
Wyoming	113	73	44	95	125

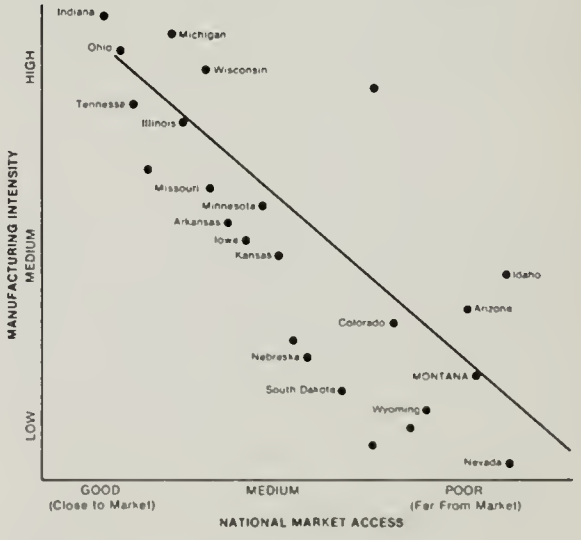
SOURCE. Chase Econometrics, Inc.
Western Analysis, Inc.

average in the southern states and that Montana is slightly higher than the national norm. However, these figures are based on estimates and do not reflect differences in the relative profitability of businesses from state to state. The overall tax burden (total federal, state, and local taxes as a percent of state income) in Montana, perhaps a more representative figure, depicts a very different situation, with Montana being substantially lower than the national average.

TRANSPORTATION

Transportation costs generally account for about two percent of total manufacturing cost although the variation between industries is significant, ranging from a low of less than ½ percent to over seven percent, depending upon the product. Estimates of overall access to national markets suggest that Montana's relative transportation costs may be as much as 50 percent higher than the average state and nearly 100 percent higher than most states in the "manufacturing belt."

FIGURE 6 MANUFACTURING INTENSITY AND MARKET ACCESS



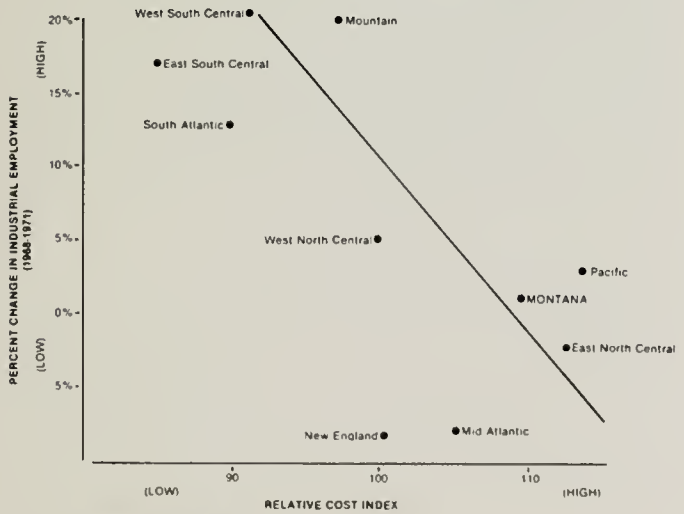
SOURCE: Western Analysis, Inc.

Figure 6 illustrates the relationship between market access for landlocked states and manufacturing intensity. Market access is defined as an approximation of the relative transportation costs of serving the entire nation from one state. Manufacturing intensity is defined as the percent of state income that is related to manufacturing income.

STATE OVERVIEW OF COSTS

In order to present the data in a more meaningful way, the five cost components were averaged based on the relative input costs of manufacturing by using the national input/output table. For example, labor costs represent 81 percent of the overall index, utilities 6.0 percent, and taxes and transportation 6.5 percent each. This composite index, computed by Census region, is shown in Figure 7, along with manufacturing growth. As can be seen, the southern and mountain states have experienced more rapid growth and have relatively lower costs. Conversely, the old manufacturing belt states and the Pacific region have experienced slower growth and have relatively higher costs. Montana's costs are also quite high and growth has been rather slow. But, as was mentioned earlier, there are far more determinants of manufacturing activity than simply labor, energy, transportation costs, etc. Several such factors are discussed below.

FIGURE 7
INDUSTRIAL GROWTH AND COMPARATIVE COST



SOURCE: Western Analysis, Inc.

OTHER GROWTH DETERMINANTS

Manufacturing firms often locate in areas where they have both an immediate market and an immediate source of inputs including specialized labor, technical assistance, large financial institutions, and the availability of related manufacturing firms and shops. Generally, such advantages are found in large urban areas.

There are very few significant linkages within the Montana economy. With the exception of the mining, wood products, and, to a limited degree, the agricultural complex, manufacturing firms in the state are virtually independent. They are not functionally tied through internal sales or technology.

Relatively few national manufacturing firms are tied to the natural resource base. However, in Montana, a raw material orientation has been the rule rather than the exception. Nearly 75 percent of manufacturing activity in the state is directly linked to the resource base, a proportion which is probably higher than in nearly any other state.

The transportation cost of raw materials is the dominant location factor for many Montana industries, since it is not feasible to transport raw ore, uncut timber, etc., for any great distance. It becomes necessary to at least partially process the material to reduce cost.

PROMOTION OF MANUFACTURING ACTIVITY

No one can deny that there are benefits for a state or community in capturing industries that operate elsewhere or might open branch plants in another area. But it is very important to realize that the principal source of differences in growth rates among states lies in the rate of birth of new enterprises and in the expansion of existing ones. Of the new jobs created in the economy, both in Montana and the nation, the vast majority come from the birth and expansion of independent corporations, not from branch plants.

Traditional industrial development strategies, sometimes referred to as smokestack chasing — pirating firms from out-of-state, have produced negligible results. In Montana's overall development program, the emphasis is on public sector encouragement of acceptable forms of business growth. However, such encouragement has not been defined in the traditional sense for two reasons. First, in Montana, the traditional strategy is politically unacceptable, and, second it is largely impractical. This clearly does not mean that the state is uninterested in environmentally sound industries locating in Montana, but rather that the focus of attention has been

placed upon aiding the development of existing business. Such assistance includes aid with financing arrangements, management techniques, expansion plans, new product and new market studies, and liaison with state and federal regulatory agencies. It also requires active cooperation with local economic development organizations.

Important considerations to Montana's development effort are presented below in summary form.

— Manufacturing employment in Montana and throughout the nation has grown rather slowly in comparison to overall employment change. Since 1960, national employment grew by 46.3 percent while manufacturing increases were 16.4 percent. In Montana, total employment and manufacturing employment rose by 36.0 percent and 18.6 percent respectively.

— Approximately seven percent of all national manufacturing firms have "tentative" plans to expand existing facilities or establish plants at a new location **each year**. Less than 15 percent of the plans actually materialize. Furthermore, it is likely that development will occur at an existing site, i.e., not at a new location. Less than 10 percent of these firms **ever** relocate or grow to the point of having branch plants. Of course, firms that do are some of the largest and, hence, most likely to relocate.

— About half of the firms which do establish at a new location prefer a metropolitan area. Approximately 40 percent have a community size preference relevant to Montana.

— National manufacturing growth within the past two decades has been found in "footloose" industries, which usually have relatively low employment requirements, lower than average wages, high value-added characteristics, a national market, and relatively low transportation costs. Examples of such industries include electronic components, hardware, surgical instruments, truck trailers, fabricated metal products, clothing, etc.

— Although there is no **specific** information available, it appears that about 40 percent of the manufacturing employment expansion in Montana since 1960 has been in this light-industry group, i.e., the footloose firms.

— After a firm has determined a suitable area (region or state) for relocation, based on comparative costs and interindustry linkages, it will begin to search out individual communities which meet its needs. Nationally, manufacturing firms consider the following community attributes most important when relocating, listed in order of importance:

(1) fire protection
(2) contract trucking
(3) police protection
(4) trained worker availability
(5) unskilled worker availability
(6) air service (passenger)
(7) tax incentives (local)
(8) industrial zoning

National firms also regard the following plant site features as most important:

(1) interstate highway access
(2) natural gas service
(3) industrial water supply
(4) rail service
(5) sewage processing
(6) solid waste disposal
(7) soil load-bearing capabilities
(8) air freight service
(9) industrial parks

SOURCES: U.S. Department of Commerce
Bureau of Labor Statistics
Montana Department of Labor and Industry
Western Analysis, Inc.

MONTANA'S BASIC INDUSTRIES

INTRODUCTION

This chapter examines Montana's most important basic economic sectors, their historical levels of activity and their respective roles in the state's economy.

AGRICULTURE

Montana agriculture has undergone substantial change represented by larger and fewer farms, a smaller work force, greater capital inputs, and growing commercialization. The continuing migration of farm labor has effected not only rural areas but urban centers as well. And, to this day, many agricultural areas within Montana are still experiencing outmigration.

This rapid change, largely a product of technology, has had both good and bad effects. Clearly, the ability to produce more and more each year has been good for a hungry world, but bad for individual farmers and ranchers as a result of unacceptable prices — mirrored by a host of federal subsidies in the 1950s, 1960s, and early 1970s. Agriculture, more so than any other industry, is subject to boom and bust cycles through climatic whim and changes in demand on a world-wide basis, changes which affect not only the agricultural communities but the overall economy of Montana.

For many years, farming and ranching have employed more Montana people and provided them more income than any other basic industry. Since 1920, the high point, agricultural employment has fallen from 38 percent of the employed labor force to slightly under 10 percent today. But agriculture still remains the dominant economic force of Montana and, in all likelihood, will continue to be the number one industry in the future.

Output and Employment. Since 1960, overall employment in agriculture has declined by approximately 15 percent. However, production of cattle and grain has significantly increased as shown in Table 4.

As a result of climatic and market variations, output trends in agriculture are somewhat difficult to interpret. For example, cattle and calf production is very sensitive to prices. Although the herd is now building as a result of good prices, production is still less than in the early 1970s. Also a substantial amount of the increase in grain production (1975-76) was the result of unusually high moisture. Another reason for the long-term increase in grain output is that the amount of land under cultivation has risen approximately 10 percent within the last decade. And, of course, improved procedures and management have resulted in higher yields. Primarily as a result of improved technology, Montana farmers and ranchers are working larger acreages — up 29 percent since 1960 — with a corresponding decline in the number of farms.

Income. Agricultural income data are notoriously bad. Between 1973 and 1977, dramatic declines resulted from falling prices, but these declines are difficult to measure accurately. The 60 percent drop in farm income in a single year (1976-77), however, must be recognized as one of the most serious collapses Montana agriculture has ever experienced. Farm income increased substantially in 1978 and may show further improvement in 1979.

Growth Considerations

— Transportation is basic to all economic development and of primary importance to agriculture. All sectors of the economy need reasonable rates, good services, and efficient and integrated transportation systems. Rising energy costs and rail abandonment will strain agriculture's potential for growth.

— In addition to potential transportation problems, the overall energy input to the food system has grown nearly eight times as fast as the food energy consumed. Rapid increases in fertilizers and fuel prices can be anticipated. This could also slow output increases.

TABLE 4
MONTANA AGRICULTURAL OUTPUT

	CATTLE AND CALVES		ALL WHEAT		BARLEY	
	Production (1000 lbs.)	Number[1] (1000 head)	Production (1000 bu.)	Harvested (1000 acres)	Production (1000 bu.)	Harvested (1000 acres)
1960	789,875	2245	79,397	4088	40,444	1721
1961	742,180	2155	54,048	4262	26,370	1465
1962	737,845	2133	79,332	4248	54,961	1802
1963	828,865	2325	92,294	4246	44,663	1514
1964	927,420	2672	93,752	4156	49,692	1529
1965	948,420	2758	105,350	4551	50,050	1300
1966	985,385	2841	99,694	3885	63,564	1651
1967	973,940	2869	119,136	4825	37,022	1255
1968	1,062,930	2984	125,869	4722	42,735	1155
1969	1,066,560	2984	99,754	3920	67,914	1617
1970	1,089,015	3014	85,167	3506	65,132	1714
1971	1,122,103	3165	112,011	4516	58,800	1680
1972	1,103,350	3165	98,831	4130	64,013	1707
1973	1,053,550	3197	93,714	4235	60,000	2000
1974	1,035,930	3380	120,108	5020	37,120	1280
1975	963,050	3340	155,925	5130	50,700	1300
1976	967,940	3150	167,295	5415	52,065	1120
1977	840,080	2980	130,920	5060	55,480	1520
1978	n/a	2570	146,050	n/a	56,375	n/a

[1] Inventory beginning of year
SOURCE: Montana Agricultural Statistics, Montana Department of Agriculture.
U.S.D.A Economics, Statistics, and Cooperative Services; Crop Reporting Board.

— While the number of irrigated acres has increased (7%) over the last decade, the proportion of output from irrigated land to the total crop has remained unchanged. Furthermore, within the last few years, the acreage has declined somewhat, possibly a reaction to lower grain prices. This slow growth is not particularly encouraging. In addition, only small improvements in irrigation efficiency associated with current practices are expected to occur in the future. Widespread application of new technology to achieve significantly increased irrigation efficiency will be stifled without changes in water rights distribution or major public program incentives.

— In all probability, the single most important factor influencing future agricultural output will be the overall level of world demand, including the ability to pay. Rising population, particularly in developing countries, may more than double export demand within the next decade. Furthermore, long-term declines in food reserves and the more current downturn in worldwide grain output per hectare will continue to place a greater emphasis on the national ability to produce.

— There exists a significant potential to boost yields, as shown in the following table. However, the question is not so much does the technology exist but, rather, is it economically viable?

TABLE 5
AVERAGE AND RECORD YIELDS
(National)

	Average	Record
Corn (bushel per acre)	72	307
Wheat (bushel per acre)	28	216
Soybeans (bushel per acre)	24	110
Sorghum (bushel per acre)	45	320
Oats (bushel per acre)	48	296
Barley (bushel per acre)	38	212
Potatoes (bushel per acre)	420	1400
Sugar beets (ton per acre)	19	54
Milk production per cow (10^3 lbs.)	10.3	50
Eggs per hen	230	365

SOURCE. American Association for the Advancement of Science

— Scientific groups concerned with priorities in food and agricultural research are agreed that the returns from a long-term program of expanded basic research are likely to be great. Additional public investments in a wide variety of projects are needed.

— Another potential technical change which may affect Montana is the increasing feasibility of ethanol from grain. Opinions surrounding the viability of synthetic fuel from grain (or other inputs) are extremely divergent. However, a major increase in the real price of gasoline may quickly move this process into the realm of practicality.

Long-Term Outlook. The most recent output projections for Montana agricultural products (Montana State University) indicate potential gains of 33 percent (since 1977) in cattle and calf production by 1990. Increases in wheat and barley are expected to be 13 and 2 percent respectively. However, these projections for Montana agriculture can only be realized if Montana retains its competitive strength relative to agriculture in other regions of the United States.

WOOD PRODUCTS

After World War II, the tremendous increase in construction activity insured a continued demand for Montana wood products. This postwar increase was also related to declining timber supplies in other parts of the nation. Producers began to view Montana's resources, which to this point had not been fully utilized, with more interest. Increasing prices and improved technology in terms of harvesting steep slopes gave rise to numerous small mills during this period. However, this postwar boom was relatively short-lived. Between rising interest rates, mortgage constraints, and the falling demand for mine timbers (i.e., shift to open-pit mining) the industry experienced a sharp reduction in output and employment. But within a few years, the industry regained stability and became more diversified through pulp, paper, particleboard and other products.

As prices for lumber products continued to rise, a strong market developed for residuals from the existing industry. These technical innovations not only expanded employment but improved the efficiency of the entire system. Many of these new products were produced using by-products of other firms which were previously burned or disposed of by other means. Other advantages included less seasonal fluctuation in employment and another income source (sale of chips to the mills).

Increasing national demand for plywood because of a shortage of logs for plywood in other areas also helped Montana's industry to grow. Mills were increasingly modernized and new products were added, such as laminating, paneling, finger-jointing, pressed logs, and studs, which can be made from smaller trees. Many of these new technologies and products were the result of or in reaction to rising prices, increasing shortages, and growing demand — of course, all related.

Output and Employment. Table 6 provides employment and production data since 1960. Although recent employment data (1978) indicate this industry is doing well, current production data are not available. However, a reasonable estimate for recent output is in the order of 1,100 million board feet. When reviewing this information, several things should be pointed out.

First, employment levels are highly affected by housing construction, particularly in the midwest, Montana's market. The level of construction in turn is largely dependent on interest rates and credit availability. And, as a result of these dependencies, western Montana's income and employment is affected by national business cycles. For example, housing construction peaked in 1973 and then declined sharply for several years. A similar pattern can be seen in the wood products employment data.

Second, because of increases in the efficiency of utilizing wood residue, previously discarded, employment has continued to grow while the actual harvest has declined slightly. There has also been a slight decline in production efficiency, when crudely measured as board feet cut per logger. Within the last fifteen years, this measure of output per worker has fallen by approximately 20 percent. This decline may reflect several related events. Specifically, there are fewer large trees, new areas of development are increasingly more costly to harvest (slope, accessibility, etc.), the mix of harvest between private and public lands has changed and so has Forest Service policy — which has grown increasingly more restrictive.

Third, although not shown in Table 6, there has been a marked shift in the composition of the harvest — the federal contribution (mostly Forest Service) declining and private forests picking up the difference. In 1970 and 1971, public timber amounted to approximately two-thirds of the harvest, the rest coming from private lands. However, within a few years the pattern of public and private harvest significantly changed, placing relatively less emphasis on public lands and more on private. The allowable cut on public land has been much higher than the actual cut since the early 1970s. This may have resulted from federal wilderness review or possibly other actions on the part of the Forest Service, which resulted in a more conservative cut. Or, it may simply have been a matter of arithmetic — the

way in which the allowable cut was calculated. Regardless of the cause, the effect was to shift the burden of harvest to private lands.

TABLE 6
MONTANA LUMBER EMPLOYMENT AND OUTPUT

	EMPLOYMENT	OUTPUT* (Millions of Board Ft.)
1960	7300	1035
1961	7400	1152
1962	8000	1259
1963	8500	1166
1964	8400	1271
1965	8600	1311
1966	8900	1375
1967	8700	1347
1968	8900	1499
1969	8900	1397
1970	8200	1281
1971	8700	1397
1972	9200	1311
1973	9800	1445
1974	9500	1165
1975	8100	1038
1976	9100	1197
1977	9300	1250
1978	10700	n/a

*NOTE: The production figure is measured in millions of board feet of cut lumber and does not include processed materials.
SOURCE: Western Wood Products Association
Montana Department of Labor and Industry

Growth Considerations. — This industry is also accustomed to market uncertainty. Changes in national demand and the resulting boom and bust cycle have been and will remain a fact of life. However, the long-term future of the industry is much more related to changes in management policy than to national demand. The U.S. Congress and Forest Service, currently in the limelight, will be making decisions which will significantly affect timber practices. The Roadless Area Review and Evaluation Process (RARE II) and the 1976 National Forest Management Act (which could result in a harvest reduction) represent two major decision points. However, it should be stressed that these two "issues" are only part of a continuing process. That is, all planning processes are subject to change when warranted.

— RARE II represents one of the most hotly debated topics in Montana in recent years. It is an emotionally charged issue with comments from both factions (pro-development, environmental) often making equal sense but being totally divergent. In addition to the problems associated with polar extreme viewpoints, the problem is magnified by uncertainty due to poor information. The industry is arguing that excessive or poorly selected wilderness areas will result in future job losses. They are right, but the question is—how many jobs will be lost. Environmental concern for noncommodity values is, however, important. But the argument goes much deeper than simple wilderness and nonwilderness distinctions, to the pressing need for good management of both public and private forest lands in the future. The RARE II process, apparently the result of a frustrated Congress and growing sentiment over the inability of the Forest Service to manage, merely helped to make the issue more publicly visible.

— Aside from these more negative prospects and certain elements of short-term business uncertainty, the demand for housing should remain strong for the next decade. Specifically, demographic patterns — the large number of new young adults born in the 1950s — should help maintain a high level of new household formations. But, it is likely that most of the employment increase will continue to be found in processed materials as opposed to actual logging or the milling of dimension lumber. Also, the use of forest residuals may become feasible within the next ten years, adding to employment.

— There is little dispute by industry experts that productivity on federal lands could be increased greatly through intensive forestry management — artificial planting, control of competing vegetation, fertilization, thinning, and breeding of new genetic strains. The Forest Service admits that the land under its management produces 50 percent less wood fiber per acre than industry-owned lands and, with respect to best practice industry land — much less. However, environmental tradeoffs exist. Furthermore, rapid timber growth in the southern states may result in Montana losing its share of the national market.

Long-Term Outlook. In view of these qualifications, most projections for the industry show few changes in the level of the timber harvest, which is expected to remain constant. Nevertheless, it is doubtful that the present rate of harvest on private lands can be indefinitely maintained; current rates of logging are well above historical averages. This means that in future years, there will probably be a greater reliance on public lands for timber supply than at present.

MINING

The Montana State Seal appropriately presents the words "oro y plata" (gold and silver), as well as

the tools of a miner. To this day, mining, Montana's first industrial sector, still remains prominent. Until 1950, metal mining employment was significantly larger than any other mining activity. But since the mid-1950s, substantial losses have occurred in this sector, amounting to over 6,000 jobs. These were jobs that paid wages well above the Montana average, resulting in a serious loss for the state, particularly in the Anaconda and Butte areas. Metal mining activity (employment and production) has always been very sensitive to national and world markets. Rising foreign competition and outmoded technology have resulted in extreme uncertainty. However, prospects for improvement seem to be favorable.

Primary metals employment at Great Falls and Anaconda has also declined because of the modernization of plants. One "new" facility (1955) is the aluminum plant located at Columbia Falls. This operation, located near the Hungry Horse Reservoir, was developed largely because of inexpensive power. However, with the proposed changes in the BPA's rate structure, the rates and contracted power for the plant pose new uncertainties. Because the firm's input costs are geared toward cheap electricity, a doubling or tripling of rates may result in a tight profit squeeze. In order to reduce potential impacts, the company is incorporating more energy-efficient processes. The most recent plant addition (1974), the arbiter located in Anaconda, is currently closed.

Until the last few years, oil and gas employment was relatively stable. However, since 1977, exploration and leasing activity has taken a sizable jump, particularly in the Shelby, Glendive, Sidney, and intermountain areas. Potential for development of the "overthrust belt" along the Rockies may be significant, given sizable finds in Utah and Canada. The recent oil price hikes may also stimulate interest in this region, once federal leasing policy is stabilized and RARE II resolved.

Other forms of nonmetallic mining activity have generally been stable. But clearly, coal production has not followed this pattern and has increased from virtually nothing in 1970 to an important and expanding sector of Montana's economy. One only needs to look at employment and population patterns in southeastern Montana to determine the significance of this change.

Production data for Montana's most significant mining activities are shown in Table 7.

TABLE 7
MINERAL PRODUCTION

YEAR	COPPER (short tons)	COAL (million tons)	NATURAL GAS (million cubic feet)	CRUDE OIL (million barrels)
1960	91,972	n/a	n/a	n/a
1961	104,000	n/a	33,701	30,906
1962	94,021	n/a	29,955	31,648
1963	79,762	n/a	30,026	30,870
1964	103,806	n/a	25,188	30,647
1965	115,489	n/a	28,105	32,778
1966	128,061	n/a	30,685	35,380
1967	65,483	n/a	25,866	34,959
1968	69,480	n/a	19,313	48,460
1969	103,314	n/a	41,229	43,954
1970	120,412	n/a	42,705	37,879
1971	88,581	7.1	32,720	34,599
1972	123,110	8.0	33,474	33,904
1973	132,446	10.4	56,175	34,620
1974	131,131	13.6	54,873	34,554
1975	87,959	22.1	40,734	32,844
1976	91,111	26.2	42,563	32,814
1977	86,203	27.4	48,663	32,680
1978	76,320	26.7	46,950	30,429

SOURCE: United States Department of the Interior, Bureau of Mines
Montana Department of Revenue

Copper. Copper is far and away the most important non-fuel mineral produced in Montana, and its occurrence with other metals (gold and silver) contributes to its significance. Almost all of the copper is currently produced within the Butte area, but a new facility (ASARCO) of smaller scale is scheduled to begin production in the early 1980s. This particular mine, near Troy, will employ underground techniques whereas mining in the Butte district is entirely open pit.

Although present operations are extremely concentrated, other important reserves exist outside of the Butte district. The Montana Bureau of Mines and Geology has identified other important areas in Lincoln County and within the Stillwater Complex, an area rich in other minerals as well.

Depressed prices and intense international competition were responsible for the closing of underground operations in Butte (1975). The domestic industry regards certain types of competition as unfair, at least to the degree that other countries (Peru, Chile, and South Africa) are not operating under the same constraints. Specific debate over import policy centers on environmental costs associated with production in the U.S. and "dumping" at a price subsidized by foreign governments.

Even though output levels have been depressed (about 30 percent) during the early 1970s, most national projections indicate increasing production for the next 10-15 years. Nevertheless, the short-term outlook is not encouraging in view of surplus stocks and excess capacity.

Coal. Coal was to the industrial revolution what yeast is to bread — the essential starter. With it, society set about creating the tools, processes, and institutions that shape contemporary life. In a comparative sense, the United States came into the coal age late, withdrew early, and is now returning. Coal did not become the most popular fuel until after the Civil War, but by the turn of the century contributed over 70 percent of national energy use. Today the share is growing, but still accounts for less than 20 percent of the total. The early decline was almost entirely the result of rapid technological change, i.e., the internal combustion engine, electrical generation and transmission lines, pipelines, and the relative convenience of other energy types for some heating.

From the early 1940s until just recently coal was treated like the mineral equivalent of a nettle. However, shortages in oil and gas have changed this view. When the Carter Administration took office in 1977, one of its major priorities was to do something about the energy crisis. The bottom line of this plan, which emerged in April, 1977, was to reduce foreign oil consumption by approximately one-third or face dire economic and political consequences. Of more interest to Montana was the President's substitute for oil: "We should double the amount of coal we are presently consuming.".

Several serious constraints to an expansion of the magnitude suggested by President Carter exist — including tremendous capital outlays, transportation difficulties, and potential alteration of environmental quality. The major impact of the plan as proposed is to reduce oil imports by shifting to coal.

The impact on Montana is very difficult to assess. The demand for low-sulfur coal, of which Montana has an abundance, has been the primary determinant of growth. In all probability, this demand will become even greater. If the United States Environmental Protection Agency further tightens its emission standards, however, the demand could shift to eastern coal, slowing further development in Montana.

Natural Gas. Declining domestic reserves, curtailment of Canadian gas imports, and rapidly rising prices have resulted in stepped up exploration in Montana. The major suppliers of gas include the Montana Power Company (65 percent of sales), Montana-Dakota Utilities (25 percent), and nine small utilities comprising the remainder of sales. Although in-state production of gas has increased approximately 30 percent since 1960, net imports still represent about 35 percent of total consumption. The level of imports, however, has sharply declined within the last few years. In 1973, for example, 87 percent of Montana Power's sales were made from imported gas. Since Canada announced that export licenses would not be renewed, MPC substantially increased expenditures for instate exploration. As a result, Montana production going to MPC approximately doubled and statewide imports for all utilities were reduced by more than 80 percent.

Canadian export reductions have been more than offset by increased Montana production and reduced consumption — related to very rapidly increasing prices, and a decline in industrial use. Furthermore, a recent study suggests that Montana appears to be assured of a good gas supply through the end of the century.

Petroleum. Unlike coal and gas, Montana's petroleum is in short supply — most fields are relatively old and declining. Unless new areas are successfully explored and new technologies adopted, it is likely that output will gradually decline.

Montana crude production has been relatively stable for the last few years — averaging about 34,000,000 barrels annually. However, at the current extraction rate, assuming no discoveries, known reserves could be depleted within 10 years. Although current reserve estimates vary widely, data supplied by the American Petroleum Institute indicate that total proven reserves have declined by nearly 50 percent within the last ten years.

The most important potential impact on the petroleum sector in Montana centers on the refining industry concentrated in Yellowstone County. These firms — Cenex, Exxon, and Conoco — have a major impact on the Billings economy, employing approximately 1100 workers, mostly high paid jobs. Since the late 1960s, these refineries have depended on imported Canadian crude which will no longer be supplied after 1982. As recently as 1976, nearly one-half of all oil refined in Montana was from Canada.

Another factor which complicates the problem is that the technology of the refineries is geared toward low sulfur, "sweet" Canadian feed stock and is not easily adaptable to crude from Wyoming. Wyoming crude would also result in increased residuals, such as asphalt which is difficult to market because of its bulk and relatively low value. A temporary solution may be to exchange crude sent to eastern Canadian refineries for imports. In the long-term, the solution is to replace the Canadian feedstock with imported crude via the proposed Northern Tier Pipeline.

Growth Considerations. Like the wood products industry, much of the debate in the mining sector focuses on environmental trade-offs and economic growth.

— Ten years ago, energy was cheap, minerals seemed abundant, and the American life-style was more extravagant than ever. With only six percent of the world's population, the U.S. was using a third of its energy. We were burning fossil fuels and extracting minerals as if the supply were infinite. Ironically, this pattern has not changed even after the 1973 Arab embargo. Industry has effected some very significant energy savings, but gasoline, oil, and heating fuel consumption has continued to edge up, despite such savings.

— While the so-called "soft" alternatives are looking better and better, nuclear and coal have run into some big problems. Fission, once touted as the wave of the future, has become ensnarled in safety and economic questions. Coal can cause serious air pollution problems and there are reservations about coal's long-term effects on climate.

— Alternatives are being developed for other minerals as well as for fossil fuels. At the University of Pennsylvania, researchers are working on a "supermetal" derived from ordinary carbon that could reduce the demand for copper as an electrical conductor. Although the new science or molecular engineering may turn up some valuable substitutes, the most promising idea for conserving raw materials is an old one: recycling.

Right now, about two-thirds of all the things we use could be recycled. Americans throw away 70 percent of all metal after it is used just once. Only a fraction as much energy is required to recycle metal as to mine and refine raw ore.

— Most of the developments in the energy industry show growth horizons being pushed back, more as a function of the economics of energy than technology. As long as natural gas and oil are held below world and free market prices, government's desire to subsidize the consumer will thwart commercialization of existing technology — coal gasification, solar, etc.

— Conservation of natural gas as prices continue to rise will help to prevent future shortages. National gas deregulation should also help to motivate exploration and dampen demand. However, federal wilderness policies and leasing problems may represent a significant barrier to development, particularly along the Rocky Mountain Front.

— The primary factors which will influence crude petroleum extraction include conservation, federal crude oil pricing, federal and state leasing, environmental policies, and taxes. Although the prospects of significantly increasing the levels of oil and gas production are not high, the outlook for increased employment is favorable. Drillers in the Montana portion of the Williston Basin are having extraordinary success in deeper exploratory and development drilling. The experimental tertiary recovery of crude oil in the Belle Creek Field in Powder River County has also been highly successful. By employing a process called mycelar-polymer flooding, the Belle Creek Field produced over nine million barrels of crude oil in 1977 — the highest production of any Montana field. The new strikes and improved technology may maintain current production levels of oil and gas for a few more years.

Long-Term Outlook. 1978 was not a good year for copper production, but in view of the Troy mine proposal and national forecasts for copper demand, it is likely that some growth will occur in the 1980s.

However, employment in primary metals manufacturing will probably remain constant.

On the basis of existing mine development plans, coal employment and output levels are expected to more than double within the next decade.

Oil and gas exploration is also expected to experience significant gains as the United States attempts to become more energy independent.

RAILROADS

The railroads brought people and economic activity to the state, and provided outlets for mineral and farm products. New towns were established at railheads and/or service points — Glasgow, Havre, and Kalispell on the Great Northern; Glendive, Laurel, and Livingston on the Northern Pacific; Harlowton and Deer Lodge on the Milwaukee; and Dillon on the Union Pacific. Rail employment is still important to several of these cities — particularly Havre, Livingston, and Laurel.

Following the construction of the Milwaukee Road in 1909, there were 20,000 railroad employees in Montana compared to the present level of about 7,000. The depression resulted in a loss of nearly 10,000 rail workers, but World War II created an unusual demand for rail employment, increasing the total level to nearly the number employed prior to the depression. However, after the war, rail employment dropped sharply. Passenger travel declined, trucks and planes captured a larger share of the freight business, and companies rapidly shifted from steam to diesel engines. Switchyards were automated, and several mergers also took place. Employment continued to fall as productivity per man increased. The relative shift in emphasis between rail and motor carriers is shown in Table 8.

TABLE 8
TRANSPORTATION EMPLOYMENT

	Rail	Other*
1960	9,000	4,000
1965	7,500	4,000
1970	6,600	4,600
1975	6,100	5,600
1976	6,100	5,700
1977	6,300	6,100
1978	6,900	6,600

Source Montana Department of Labor & Industry
*Note Includes motor carriers and air transportation.

Of course, the postwar decline was not unique to Montana. Decline at the national level followed a similar pattern, but railroads in Montana employed (and still employ) a larger proportion of the labor force, making the loss more significant here. Also, rail jobs pay considerably more than the average for other sectors in the state's economy.

Growth Considerations.

— Possible reductions of both passenger and freight rail service — Amtrak and the Milwaukee Road — are issues of great significance to the state. There are relatively fewer alternatives open to Montana than to the more populated areas of the nation and greater distances to travel or transport products. Additional reductions in rail service could have a significant impact, particularly at the community level. Good examples include Harlowton and Deer Lodge, which could be adversely impacted by the closing of the Milwaukee.

— Recent changes in the patterns of U.S. economic activity have been almost uniformly unfavorable to conventional rail service: the sluggish growth in consumption of bulk commodites, particularly those that typically move by rail; the trend toward more highly fabricated manufactures and toward freight of a higher value per unit weight; the trend toward product differentiation and competition among products on the basis of quality and service rather than price; and the urbanization of the population and growing self-sufficiency in the manufacturing capacity of metropolitan areas. Also, the segments of the freight market in which railroads hold a commanding economic advantage have diminished as the truck, the pipeline, and the airplane have been developed to satisfy specialized transport needs.

— Neither the railroad industry nor public policymakers can do much to slow the railroads' loss of traffic when other modes possess a genuine comparative advantage. There are, however, indications that the railroads' loss of market share on this account may be coming to an end. The trucking industry has already diverted most of the high-value freight, where the emphasis is on quality of service.

The traffic loss that should be of greatest concern to the railroad industry is the diversion of traffic for which the railroads actually still possess either a present or a latent comparative advantage. One of the most serious examples of misallocation of traffic is large truckload shipments moving in excess of 200-250 miles in length, nearly $5 billion in 1968, was almost equal to 50 percent of that year's total railroad freight revenues. Such misallocation of traf-

fic raises the cost to society of freight transport by an estimated $1 billion a year. It is estimated that trucks consume approximately four times as much fuel per net ton-mile as railroads.

— A major commitment to containers and intermodalism — using a combination of rail and truck to deliver a shipment — is a necessary first step toward solving the railroads' problems by stressing their strengths and discarding their weak points.

Despite its comparatively rapid growth, national containerized traffic still accounts for only about five percent of total railcar loadings, about two percent of freight tonnage, and about six percent of freight revenues.

— Another problem, as a constraint on railroad productivity, is the question of what to do with the parts of the rail network which have become economically burdensome.

Large amounts of rural track were built to serve thriving communities which had no alternative means of cheap transport in the nineteenth and early twentieth centuries. Many of these communities have declined or even disappeared, while at the same time the highway has come to serve the transport needs of most rural communities. Obviously, the affected communities protest since they are losing a valuable service, but the railroad, through perhaps no fault of its own, is financially strained.

Long-Term Outlook. Rail employment declines have stopped within the last few years, largely related to increased coal traffic. Although the loss of the Milwaukee and proposed Amtrak curtailments could result in an employment decrease of several hundred jobs, total employment in this industry is expected to gradually increase because of rising coal exports. Also, the expansion of rail transportation would result in more efficient energy use, few land-use consequences, and less pollution by a substantial amount — 2 or 3 to 1. Capital requirements are, however, severe and rail profitability is questionable at the present. In view of these considerations, it seems plausible that rail employment will grow somewhat and motor carrier growth will slow.

TOURISM

No review of Montana's industries would be complete without a discussion of the importance of tourism and travel. Unfortunately, employment and income data are gathered in such a way that reliable information on this sector is limited. Service and trade sector data are reported by type of economic activity and not by the type of customers served. For example, a restaurant serves both in-state as well as out-of-state residents, so it is difficult to determine whether the employment and income generated by such a firm is basic (serving non-residents) or non-basic (serving the local economy). Expenditure estimates are produced by the Travel Promotion Unit of the Montana Department of Highways. This information and an estimate of income generated by each sales dollar implies that the overall travel industry generates for Montana approximately 12,000 full-and part-time jobs and about $60 million in annual income.

Table 9 provides a comparison of tourism with other basic economic sectors. The tourism figures are based on estimates, not reported data.

Assuming that the estimates are correct, tourism is Montana's sixth largest income producing sector and second largest basic employer. In counties such as Carbon, Flathead, Gallatin, Glacier, and Park, tourism is even more important.

TABLE 9
TOURISM COMPARISON
(1974)

Industry	Percent of Total Income	Percent of Total Employment
Agriculture	14.4%	12.9%
Wood Products	3.0%	3.1%
Mining	2.6%	2.3%
Rail Transportation	2.5%	2.1%
Tourism	1.6%	3.3%
Other Manufacturing	1.4%	2.1%
Primary Metals	1.2%	1.1%
Food Products	1.1%	1.4%
Refining	0.6%	0.4%

SOURCE: United States Department of Commerce, Bureau of Economic Analysis
Tourism Estimated by Western Analysis, Inc.

Although travel expenditures in Montana are much lower than in many other states (Montana ranks 43rd), the importance of tourism in a relative sense is much higher. A recent study by the University of Nebraska suggests that Montana ranks 14th in terms of the relative impact of tourism. The tourism industry is particularly strong in terms of bringing out-of-state vistors into Montana. Of the estimated $387 million in total tourist expenditures in 1977, nearly two-thirds was made by nonresidents.

Growth Considerations.

— Short-term fuel shortages may result in occasional difficulties for this industry. But, as national income, crowding, and leisure time increase, it is reasonable to assume that this industry will experience substantial growth, particularly in light of the spectacular natural attractions found in Montana.

— Rising energy costs may also result in a shift to railroads, buses, and planes — away from private car dominance.

— International tourism will continue to grow in Montana.

OTHER BASIC SECTORS

Federal Government. Federal government employment in Montana has grown at approximately double the national rate since 1960. However, a growing concern over deficit spending and taxes may significantly slow further growth in this sector. Furthermore, employment at military installations is expected to decrease moderately, potentially impacting the Great Falls economy.

Heavy Construction. There are several major developments which could result in increased heavy construction activity over the next five years: the construction of Colstrip 3 and 4, an accelerated interstate highway program, and the possible construction of the Northern Tier Pipeline. These represent potential developments which are tied to basic economic sectors, hence, heavy construction is occasionally classified as a basic industry.

Other Manufacturing. The manufacture of food products in Montana represent another important sector, employing about 4,000 workers. However, employment in this industry has been very stable for the last twenty years. The same has been true nationally. Although there exist several potential options for expanded processing (meat packing and grain milling), employment is not likely to significantly change in the foreseeable future.

PROJECTIONS: 1990

THE NATURE OF PROJECTIONS

Projections of employment and population levels are seventy percent trend and one hundred percent judgment. The future cannot by any means be predicted with refined accuracy. However, projections are an important part of planning for the future. The following long-range growth scenario represents Montana's "best idea" as to what the next decade will bring. Table 10 and the associated figures illustrate Montana's most likely pattern of future growth as defined by state and private economists.

Principal assumptions for the projections are provided below:

Agriculture: Future productivity increases will be similar to gains experienced within the last 15 years. Although beef and grain output will increase, farms and ranches will be larger and more mechanized, resulting in decreases in employment.

Metal Mining: Long-term national projections call for moderate increases in copper output over the next twenty years. In addition, one new mine (ASARCO at Troy) will be in operation within three years. An expansion in other metals (gold, iron, etc.) is also expected.

Coal: Montana's coal output will continue to grow in the future with relatively sharp expansion occurring from 1980 forward. The importance of coal as a national energy source will increase.

Oil and Gas: Substantial growth has occurred in oil and gas exploration within the last few years. Energy shortages will maintain this expansion. Secondary and tertiary recovery techniques will also add to employment.

Wood Products: The demand for forest products will remain high, but raw material supplies are more uncertain. However, the total timber harvest is assumed to remain constant. Employment growth will result from new product development and more efficient use of wood fiber.

Primary Metals: No change.

Food Products: No change.

Other Manufacturing: Light industry will continue to expand at the present rate.

Transportation: Light density lines will be abandoned and the more profitable lines of the Milwaukee Road will be absorbed. Rising energy costs and coal export will result in overall employment increases. Motor carrier employment growth will slow.

Federal Government: Federal employment growth will slow and moderate military reductions occur, resulting in a near constant level of federal employment.

Non-Basic Employment: Trade and service related growth rates will slow as Montana reaches the national level of service and trade concentration. A declining labor force growth (the end of the baby boom phenomenon) will also contribute to this decrease in the rate of expansion. Only very limited increases are expected in state and local government, much less than during the current decade.

IMPLICATIONS

The projections suggest a positive future for Montana, very similar to the expansion which has taken place since 1970. Basic employment levels are expected to rise slightly, a favorable comparative change in view of the national trend. Even though non-basic employment growth will probably slow somewhat when compared to the "boom" during the 1970s, overall employment growth is likely to be strong.

Population is also expected to grow at about the same rate as experienced during the present decade with continued in-migration accounting for a substantial part of the increase.

TABLE 10
LONG-RANGE PROJECTIONS FOR MONTANA
(Thousands)

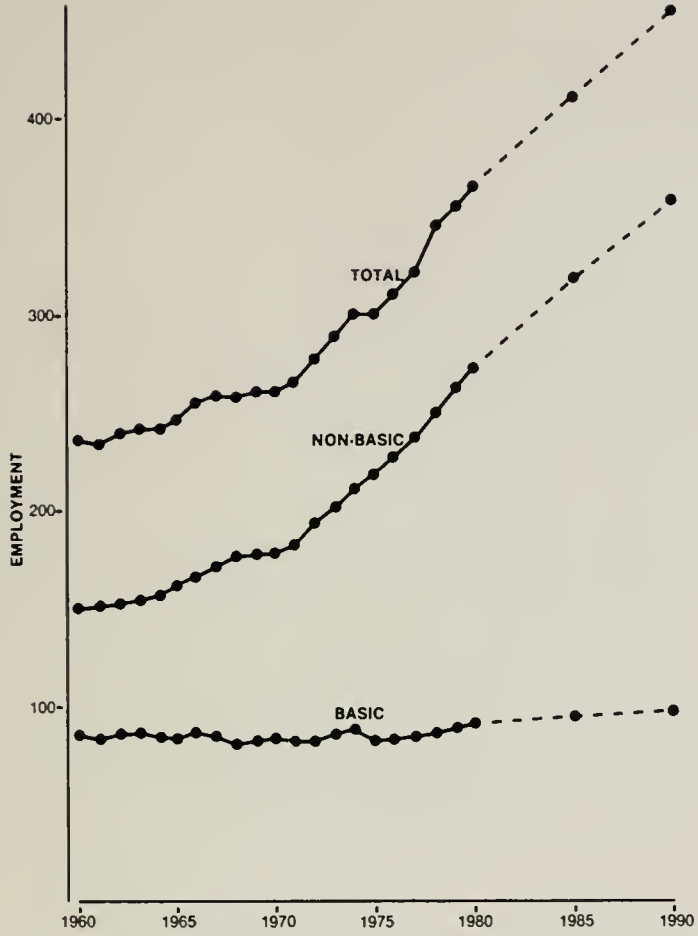
EMPLOYMENT	1978	1980	1985	1990
BASIC				
Agriculture	33.0	32.5	31.0	30.0
Mining	6.9	8.5	10.6	12.4
Metal	2.1	2.4	2.9	3.2
Coal	1.2	1.5	2.5	3.5
Oil and Gas	2.8	3.6	4.2	4.6
Other Mining	0.8	1.0	1.0	1.1
Manufacturing	26.2	26.3	27.8	29.4
Wood Products	10.7	10.5	11.0	11.5
Primary Metals	3.2	3.0	3.0	3.0
Food Products	4.0	4.0	4.0	4.0
Other Manufacturing	8.3	8.8	9.8	10.9
Railroad	6.9	7.0	7.3	7.6
Federal Government including Military	18.8	19.3	18.6	19.4
Total Basic	**91.8**	**93.6**	**95.3**	**98.8**
NON-BASIC				
Transportation, Communications and Utilities, excluding Railroad	14.7	15.7	17.8	20.0
Construction	16.3	16.5	18.2	19.9
Trade	71.3	77.2	94.2	106.9
Services*	64.1	70.3	85.5	99.7
State and Local Government	57.7	58.0	63.0	68.0
Non-Farm Proprietors	37.4	39.0	44.0	49.0
Total Non-Basic	**261.5**	**276.7**	**322.7**	**363.5**
Total Employment	**353.3**	**370.3**	**418.0**	**462.3**
POPULATION				
Employment Based	785.0	803.6	872.9	939.1
Natural Growth	n/a	755.6	794.4	830.1
Migration (from 1970)	n/a	48.0	78.5	109.0

*Note: Includes Finance, Insurance, and Real Estate
SOURCE: Western Analysis, Inc.
Department of Community Affairs

The per capita income differential between Montana and the rest of the nation, however, may persist. Generally, as rural states become more urbanized and as participation rates and non-basic activity converge with the national norm, these income differences become smaller. But, in Montana there are no current signs of convergence.

The statewide outlook is good, with employment increases expected to keep pace with population growth. Although Montana's specialization in natural resource industries may give the state the illusion of being underdeveloped, it is not — it has just developed in a different way than the manufacturing areas of the nation. This clearly does not im-

FIGURE 8. ACTUAL AND PROJECTED MONTANA EMPLOYMENT LEVELS
(Thousands)



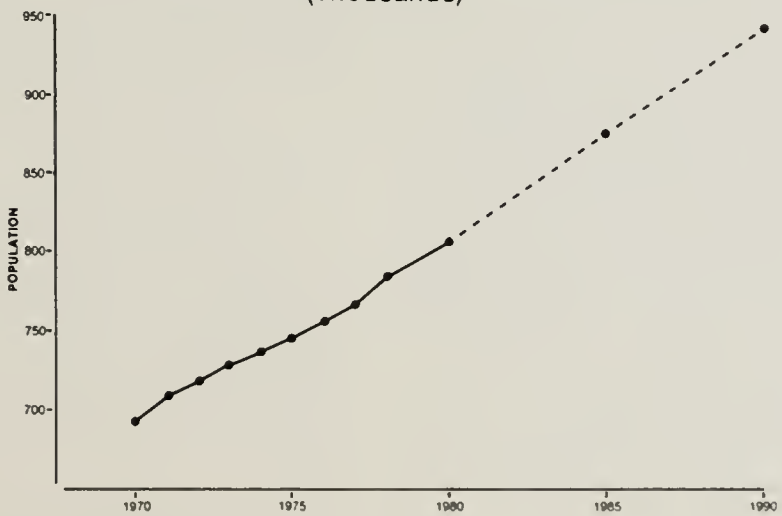
SOURCE: Western Analysis, Inc.

ply that increased industrial diversification, when possible, would not benefit the state — particularly in certain areas — but it does imply that the overall economy of the state is doing well and should prosper in the future. To be sure, industrial diversification will occur in Montana. This metamorphosis, however, will be as slow as it was elsewhere and will be determined by economic feasibility rather than wish. But, most importantly, if any of the major natural resource or supporting sectors falter, the economic gains of the 1970s may quickly be lost.

Montana is fortunate to be endowed with timber, minerals, and extensive agricultural lands. The future of Montana will rest on these riches and upon the decisions which affect their use. Many crucial trade-offs will exist in the future. For example, a national farm policy which would benefit Montana would necessitate higher food prices, and would be met with resistance nationally. Timber cutting and mining policies are even more complex when environmental costs are weighed. No simple solutions exist in such complex situations, but Montanans should insure that their input is made known to national and state decision makers, both private and public, when the vitality of the economy and the quality of the environment are at stake.

With good judgment, Montana will be as it is today, healthy and prosperous — a good place to live. But, if Montana chooses to make no decisions or if the state makes decisions which are not consistent with national goals, then those few decisions that Montanans might influence will be made elsewhere by individuals far less sensitive to the state's "total" environment, including its economy.

FIGURE 9
EXPECTED POPULATION LEVELS
(Thousands)



SOURCE. Western Analysis, Inc.

PROBLEMS, GOALS, AND OBJECTIVES

GROWTH PROBLEMS AND ISSUES

Montana's current economic problems can be categorized into three broad areas: (1) uncertainty in the primary sectors as a result of economic events that are often beyond Montana's direct control; (2) uneven growth from area to area; and (3) lack of diversification.

Examples of such problems include the bankruptcy of the Milwaukee Road, the proposed Bonneville Power Administration rate changes, federal timber management policies and wilderness designation, energy shortages in the face of growing demand, copper prices and imports, and agricultural export policy. These are issues which require careful consideration on the part of state government in order to effectively present mitigating solutions. These issues will not disappear and must be faced head-on.

General Growth Issues.

— Although Montana's overall economic performance has been favorable, there are many areas within Montana where employment growth has not kept pace with the natural growth in population — resulting in out-migration. While all counties cannot grow at the same rate, Montana is particularly concerned about the long-run consequences of the continued loss of young people in several dozen counties. In some instances, this youth drain has resulted in increases in the median age to the point where future economic growth may be hampered.

Furthermore, computer analysis of employment and population growth prospects suggests that approximately twenty counties will continue to experience moderately high levels of out-migration through the next decade. Generally, these areas are rural in nature, but there are several cities as well, including Butte, Anaconda, and Great Falls. Statewide growth has been, and is expected to be, sufficient to allow individuals to find jobs in their own state, but not necessarily in their home county.

— Of the 90,000 current basic sector jobs within Montana, as many as 10,000 may face major constraints within the next five to ten years. Changes in farm policies, outmoded plant technology, rising energy costs, restrictive timber management practices, and unfavorable import/export policies have the potential to significantly impact some of Montana's most important industries. Nearly all of these possibilities are the result of external changes beyond the direct control of the state.

— Montana's income continues to lag behind the national norm. At the state level, the significance of this issue is difficult to measure, but there exists as many as ten counties within the state which have a substantial income discrepancy, 20 percent or more below the national average.

Transportation.

— As a result of Montana's remoteness from major trade centers, the state's growth may be relatively more affected by rapidly rising energy costs than other areas of the nation. Of particular concern is the possible loss of competitive rail rates for agricultural products. Federal deregulation of air and motor carrier traffic may also present difficulties for Montana during the adjustment period. There is a need for federal assistance in financing, developing, and facilitating an inter-modal transportation system specific to rural America.

Energy.

— Many Montanans are concerned about the intensifying demand for the state's non-renewable energy resources. Montana will continue to contribute to the nation's energy needs, but should not be expected to bear the full cost — both in the growth impact and in the uncertain future once these energy reserves are depleted.

— In order for Montana to better assess the need for future energy facilities, an improved forecasting and analysis capacity is important. In addition, better siting procedures should be developed to place new facilities in appropriate locations and to improve the efficiency by which such decisions are made.

— While the consumption of energy and the necessity to conserve will touch all Americans, Montana will more than likely incur greater impacts through increased coal production and oil and gas exploration. Federal energy policy, which now points to Montana and the West as the energy source of the future, should be both sensitive to and responsible for the effects. Oil, gas, and coal development on federal lands must incorporate a reasonable effort to ensure that neither Montana's environment nor its economic balance is adversely disrupted. Given the urgency of national needs, Federal impact assistance will be necessary to help affected communities cope with the problems of rapid growth.

Alternative forms of energy — solar, geothermal and synthetic fuels — will play an increasingly important role in attaining national energy independence. These creative new techniques for capturing and harnessing power should receive the full research and development attention necessary to lead to commercialization. Montana already has an active effort; the MHD facility in Butte and the state's renewable energy grant program constitute two good examples of a commitment to explore, research, and promote practical and environmentally sound solutions to long-run shortages. Development interest in coal derived fuels and in ethanol from grain is also rapidly increasing. All Americans must join in a collective and enduring drive to promote new energy development. This challenge must and will be met.

Natural Resources.

— The mainstay of western Montana, the forest industry, also hangs in the balance of federal policy — land management procedures and wilderness designation are good examples. Although RARE II is not likely to significantly impact this industry, the National Forest Management Act or other related management decisions **could**. A forward looking attitude toward timber management, jobs, and the environment is necessary in order to maintain equilibrium.

— For similar reasons, excessive restrictions on grazing could result in hard times for Montana ranchers. Grazing should continue to be allowed on all federal lands. At a minimum, the natural character of these areas should be preserved. Improved range management can result in higher carrying capacity.

— Water is a scarce commodity within the West. One specific concern to Montana is the potential for large quantities of water being diverted to energy-related activities. The necessary adjudication of all water rights and their respective allocations must be tended to with diligence and equity. Multi-state water compacts must be negotiated with unprecedented precision.

Economic Development.

— Montana's basic industries require increased research and marketing assistance in order to expand, develop, and promote new products. An expanded partnership between the private and public sectors will help strengthen the state's economy. The economic future of Montana lies not so much in attracting new business but in the future development of what already exists. Further vertical integration is extremely important.

— Capital shortages, cursed by some and scoffed by others, should be more fully investigated. When constraints do exist, the financial community and state and federal agencies should introduce innovative methods while maintaining the integrity of private capital markets.

— The economic vitality of many areas within the state is tied up to a single basic industry. The need is to help communities diversify in order to lessen the effects of boom and bust cycles. The potential closing of military installations or the long-term decline of major plant facilities represent real problems facing Montana today. Communities with the assistance of federal, state, and local government should begin to take steps to avoid crisis situations, many of which can be projected years in advance.

— Federal and state government should strive to create a balanced business climate which stimulates growth in productivity through research assistance, improved education, tax incentives, and an easing of burdensome or counter-productive regulations.

— Export marketing of many Montana products is extremely important as are the effects that quotas and tariffs have on trade. But, trade-offs exist between national and state considerations. Federal policy should always be sensitive to state impacts. When this is not possible, recovery assistance should be made available to affected communities.

Community Problems

— Federal actions should acknowledge and mitigate impact on states; states should acknowledge and mitigate the impact of their laws and regulations upon counties and cities. Even the cost of good decisions may be difficult to meet by smaller jurisdictions where the true impacts are felt. Increasing hospital, nursing home, and drinking

water standards are good examples of well intended regulations — improperly funded where funds are most needed.

— Communities are faced with a baffling array of federal assistance programs. Montana state government should begin to simplify, or at least explain in an understandable way, the nature, problems, and advantages of such programs. Specific attention should be given to urban renewal, economic development assistance, housing, water and sewer grants, etc.

— Community health and education are the backbone of society. But many such programs are geared, quite understandably, toward urban areas where most people live. In rural regions, urban solutions do not always fit. Rural health care and human service needs are frequently very different than the urban needs for which programs were designed. Modifications and adjustments should be allowed when necessary.

Human Rights.
— The heritage of native Americans should be acknowledged and respected. The special problems of native Americans should be examined in connection with all policy issues.

Summary.
— An efficient and environmentally sound economy requires the understanding cooperation of the private and public sectors — both of which play a necessary role. Improved understanding and reasonable compromise is as imperative to the quality of our economic and environmental well-being as it is to our individual rights. Cooperation must be improved, given the intensity of conflict surrounding many current economic and social issues. Balanced growth is certainly the key to the future.

GOALS FOR THE 1980s

The following section is derived from the goal statement of the Governor's Balanced Growth Program. This program, conducted during 1978-79, represents a careful review of the legitimate goals and concerns of Montana's residents. The program, including a series of public forums, was designed to explore mechanisms for state planning in a manner consistent with public attitudes toward environmental, economic, and social issues.

Introduction. "All government of right originates with the people, is founded upon their will only, and is instituted solely for the good of the whole." (Section I, Article II, Montana State Constitution) In a representative democracy, policy is established by the people to express their will. In Montana, the will of the people is identified through the deliberations of the Legislature and is executed by the Executive Branch. Both the Legislative and Executive Branches remain answerable to the people for the direction in which they point the state. The future of Montana belongs to the people; state government has the responsibility to help prepare a future which will enhance the health, welfare, safety, and economic security of all Montanans.

Defining a future for Montana must include a partnership between government - the benefactor and regulator — and private enterprise — the investor and worker. Some Montanans favor accelerated industrial development — coal-fired electric generation; exporting Montana coal; increased logging, milling, and industrial production from forest products; increased meat packing and grain milling; vastly increased light and heavy manufacturing. They reason that this type of development will lead to more and higher paying jobs for Montanans, an increased tax base, and, hopefully, lower taxes. Other Montanans believe that Montana is fine as is. Increased industrial development will only bring an increase in in-migration from outside the state, even higher unemployment as in-migration outruns the supply of jobs, burdensome demands on communities to supply schools, streets, utilities, etc. In light of these opposing points of view, it is necessary for Montana to articulate a policy for the state's growth which will meet the aspirations of a broad base of the citizenry.

By adhering to some basic principles which Montana citizens have consistently reaffirmed, the state can achieve balanced growth.

• Montana should encourage the conservation and maintain the quality of its natural resource base — land, water, air — to provide a sustained yield and continuing basis of employment and income for the state's citizens while supplying food, fiber, and recreation for itself, the nation, and the world;

• Agriculture is vital to the future of Montana. The state shall remain committed to the preservation and enhancement of the agricultural sector of the economy, and prevent unnecessary conversion of prime agricultural land and water suitable for irrigation to non-renewable uses;

• The state shall encourage the development of renewable energy sources and energy conservation.

• The state shall encourage local decision making in questions of economic development. Consistent with local preferences, Montana shall encourage the economic revitalization of those areas within the state which have experienced decline and assist people in rural areas to find decent jobs near their homes.

• Montana recognizes the importance of an educated citizenry and the value of a productive, well-trained work force. The state shall provide a quality elementary and secondary school system and other educational programs as necessary to meet the intellectual and career development of Montana's citizens.

• Montana shall seek opportunities for all citizens so that they may participate in the state's economy to the fullest extent. To that end, Montana is prepared to provide income security, training, and rehabilitative services to those in need.

• State government is to provide services to the citizens of Montana and shall do so effectively and at minimum costs.

• Montana is committed to the practice of citizen participation in all levels of governmental decision making.

• All citizens have a share in the future of Montana, the services state government provides, and a responsibility to equitably share in the cost of providing those services.

Goals for Montana. The overall philosophy and principles of balanced growth can be expressed in a set of goals for Montana. These goals state a combination of desired results and serve as guideposts for governmental action. The goals are a link between the philosophy of balanced growth and the means of accomplishing balanced growth. By stating as clearly as possible the results desired, the goals provide the basis for developing the methods to accomplish the results.

In considering the goals it should be understood that the combination of goals may be as important as any single goal. Because one goal may limit the degree to which another can be achieved, the concurrent achievement of these goals requires creative and, perhaps, complex action.

The achievement of these goals is not the sole or even, in some cases, the prime responsibility of state government. These goals indicate a state of affairs to which state government would be expected to make a positive contribution, but whose accomplishment will depend importantly on private, voluntary efforts and the efforts of other governments. The responsibilities of state government will be expressed in the statement of balanced growth strategies and actions designed to accomplish the goals.

Economic Goals.

Montanans should have expanded opportunities to own and manage their own competitive business enterprises.

Jobs should be available for Montanans that are sufficient to avoid unacceptable levels and patterns of unemployment in the state and that provide opportunities for meaningful and satisfying work.

Jobs and business activity should be distributed, to the degree possible, in a manner that avoids excessive growth in areas limited in their capacity to absorb growth. Growth should be encouraged in areas that desire and have the capacity for additional growth.

The income gap between Montana and the rest of the nation should be progressively reduced.

Montana should influence the major corporate or federal decisions that affect the development of resources in the state.

A strong agricultural base, with dispersed ownership, should be retained. Prime agricultural resources should be protected from unnecessary diversion to other uses.

Environmental Goals.

Whenever possible, natural resources should be used and maintained in a condition that allows for their reuse in the future on a sustained yield basis. Whenever reuse is not possible, the loss of a resource from the resource base should be mitigated.

The environment of the state should not be significantly degraded, and the levels of pollution should be decreased for those areas with recognized pollution problems.

Areas with high quality environmental, historical, or recreational values should have those values protected.

Social Goals.

Social patterns should be encouraged that support individuals in family groups which serve the

needs of their members for personal care and development.

Individual sense of security and freedom from fear of life or property should be guaranteed.

The existence of a strong economy, stable and supportive families, a safe and healthy environment for living and working, and an effective educational system should minimize the dependence of individuals for basic support by the public. Individuals unable to provide for themselves should be provided the basic necessities of life in a manner that protects their dignity within their home communities if possible.

Equal opportunities should be available for individuals to develop their capacities to their full potential. Personal development should not be impeded by discrimination of race, sex, religion, creed, or national origin.

The general incidence of disease and disability should be reduced.

Access to necessary medical care should not be denied for financial reasons. The total cost of medical care should be at a level that can be effectively borne by Montanans, individually or together.

Opportunities for learning should be as diverse and as widely available as possible. Knowledge of Montana and its people, its resources, and its heritage and culture should be continuously developed and made available to the public.

Governmental Goals.

State government should guarantee the constitutional rights of every individual and should respect those rights in the conduct of all its activities.

State government should effectively achieve the purposes assigned to it at the least possible cost and with the least possible interference with individual freedom.

State government should be open, accessible, and accountable to the public.

Services of general public benefit should be financed on the basis of the ability to pay as determined by earning capacity and net wealth.

PROPOSED REGIONAL AND STATE PROJECTS

INTRODUCTION

The Old West Regional Commission is authorized by Congress to foster regional development through the sponsorship of research/development and demonstration projects in critical economic areas. The primary objective of the Commission is to resolve key problems which are common to the member states through public investments that work toward:

- Stimulating economic and social opportunities and choices,
- Supporting sound growth management,
- Enhancing and protecting the natural environment,
- Promoting conservation of energy,
- Resolving special problems created in the region as a result of national policies or needs, and
- Providing a mechanism for ensuring that Federal actions take into account the needs and perspectives of the region.

With a relatively short operating history, the existence and function of the Old West Regional Commission has demonstrated that Federal/State partnerships can be effective. This success has been the result of the ability to focus federal policy and financial resources toward specific state and local needs and realities. But, the value of the Commission's programs lies not so much in the amount of federal assistance — they could effectively use considerably more — but rather in the Commission's flexibility and responsiveness to state and local needs with a minimum of red tape and bureaucratic confusion. The Commission has provided and continues to provide a unique multi-state and federal forum that enhances the potential of common problem-solving and the common initiation of new opportunities.

The OWRC allocates the vast majority of its federally-appropriated funds to regionally significant demonstration or research projects. In the process of responding to regional issues, the Commission has the obligation to insure regional applicability, benefit, and priority. Such funds are not to supplant existing categorical federal, state, or local programs, but rather to stimulate long-term solutions and to fill gaps where other public resources do not exist.

Public investment projects initiated by the Old West Regional Commission are of three general types: (1) projects which have regional significance, i.e., affect all five member states; (2) community level assistance projects; and (3) state programs which assist each state to meet its development goals. All three types of programs, however, must conform to the designated objectives of the Commission and be relevant to the needs of each state. A brief review of each type of investment project is provided below.

Regional Projects. Projects in this category are generally focused on research or demonstration programs designed to foster economic well-being within the five state region. Topic areas include energy, agriculture, natural resources, human services, industrial development, transportation, and tourism. Proposed projects are generated by each state, then reviewed by the Commission - the five Governors and their alternates. The most relevant proposals are funded, based on the expected impact and overall desirability of each project. Since the creation of the Commission, approximately 200 regional projects have been undertaken.

Community Assistance. The Old West Regional Commission also provides technical assistance grants to local governments. A local government unit can apply through the Governor's Office to the Commission. These grants, 33 since 1976, have been made to Montana communities to assist in local economic development.

State Public Investment Planning. The Old West Regional Commission provides, through an annual grant to each member state, financial assistance for the preparation and updating of a State Public Investment Plan. The research and coordination performed by this program contributes to analytical

models, data, and statements of practical economic realities and provides public input to public investment policy definitions.

The plans from each state form the basis for updating the Old West Regional Commission's regional development plan. Specific information concerning regional, state, and community projects is available from the Montana Coordinator of the OWRC, in the Governor's Office of Commerce and Small Business Development.

PROPOSED REGIONAL PROJECTS

The primary purpose of the Public Investment Planning Process is to determine appropriate investment strategies and projects which reflect important state and regional needs. The following proposals have been developed in light of current economic issues, public attitudes, and the comments of various Montana agencies. The proposals represent a regional strategy focused on several critical issues facing the economic future of the region. Montana is pleased to recommend these projects for consideration as the Commission begins its fiscal year 1980 program.

Energy Analysis

Need: Of the many issues facing the region, energy availability is perhaps the single most immediate factor which will shape the economy and life style of the future. There is a pressing need for the region to accelerate its energy planning through greater sophistication in energy forecasting, improved analysis of potential impacts of energy on the economy, and a more careful assessment of federal action which may affect the region.

Objectives:

- Determine the region's future energy needs.
- Determine the region's capability to supply those needs.
- Establish the magnitude of demands placed on the region's energy resources by external regions.
- Estimate the potential reduction in energy use which may result from widespread conservation.
- Estimate the feasible contribution of alternative energy sources and techniques.

Approach: Aggregate forecasts of energy consumption by economic sector should be made for each state on the basis of total BTU content, using standard econometric procedures. National energy price and output scenarios should also be developed. On the basis of the aggregate BTU forecasts by sector and the national scenarios generated during the first phase of the project, each state should separately determine appropriate methodologies for allocating the control total (i.e., consumption by sector) to specific fuel types and technologies. This effort should be conducted at the state level to incorporate the unique nature of each state's energy structure. The project is too complex to be conducted at the regional level or by any single contractor. A grant from OWRC should be made to the primary energy office of each state who can either conduct the analysis itself (if adequate staff capabilities warrant) or subcontract.

Again, on the basis of the necessary inputs from the first phase, each state should determine techniques for simulating production of energy by type, given price, capital costs, and estimated reserves.

Conservation

Need: In view of the potential for serious shortages of petroleum products within both the United States and the Old West Region, there is a need to develop media materials for public education on the subject of energy conservation.

Objectives: Improve public awareness and understanding of the potential consequences of energy-related issues on the economy and on personal life styles.

Approach: This information should include data and narrative descriptions of major factors influencing energy consumption, production, and prices. The depth of explanation should be such that readers or listeners may reach their own conclusions regarding the seriousness of the situation. Many important issues affecting the regional, national, and world energy outlook are not discussed in newspapers and periodicals in a way which effectively reaches the public.

The final report should be structured in such a way as to be suitable for newspaper publication — i.e., a series of 10-15 articles on various aspects of the energy situation...to be run as a series in participating newspapers. Topic areas should include the effects of federal oil and gas deregulation on price and output, motor carrier deregulation on fuel efficiency, employment, and service, the effect of oil

and gas leasing policies on production, fuel efficiency comparisons of railroad and motor carrier transportation, the fuel efficiency effects of federal pollution control on automobiles, and general production and consumption trends both within the region and throughout the nation.

Determinants of Industrial Growth

Need: One of the important economic issues in the region is the relative lack of industrial diversification. Clearly, a concentration in resource-based industries has not been accidental. The goal of this research effort is not to discount the importance of existing industries, but to systematically explore the types of business activity which may expand or develop in the future.

The Commission is cognizant of the general comparative costs and constraints to further manufacturing development. However, specific analysis and research has been limited in defining those types of enterprises which are economically feasible. Improved insight is necessary if practical development programs are to be implemented in order to diversify the industrial base of the region.

Objectives: The project should provide federal, state, and local development agencies with an improved understanding of the types of growth which are possible within the region. Also, given the constraints as defined by the research, the project should be useful in revealing industrial development assistance needs which are not being met by existing programs.

Approach: Regional and state constraints to industrial growth will be defined and quantified when possible. This is to include a detailed analysis of labor costs and requirements, transportation costs, capital constraints, taxes, industrial linkages and other common determinants of industrial location. The study should be conducted at the most disaggregated level possible, i.e., no less than three digit SIC detail. National shift patterns in manufacturing should be fully explored and reasons for the shifts by industry provided. A wide range of techniques is suggested (regression, multi-variate analysis, input/output, trade-off procedures, etc.) but the approach used must incorporate all relevant factors simultaneously. The approach should also be capable of producing a ranking of the subjective probability of growth for each industry for each state. Community size attributes and national growth patterns and outlooks by industry should be considered. A full literature review is necessary and should be included in the final report.

A mini-survey of new or expanding business should also be conducted to determine the attributes of successful and unsuccessful ventures. Personal interviews will be necessary. The purpose of the survey is to combine practical and theoretical viewpoints.

The contractor should review current state and regional development programs and policies and provide alternative industrial development strategies when appropriate.

Timber Growth

Need: Another important economic issue facing Montana is the lack of data necessary for improved forest management on second-growth stands. Lumber production, milling and related activities are extremely important to areas west of the divide. Although most states within the region are not directly affected by the wood products industry - they nevertheless receive lumber from the western OWRC area. First-stand timber is in short supply and production in Montana and other major timber growing areas will be largely from second-growth stands in the future. There is a need to research site productivity and management techniques in these areas in order to ensure adequate supplies.

Objectives: This project will be a major step in moving forest management in Montana and the northern Rockies from an art to a science. Ultimately many carefully designed experiments will need to be executed to answer the numerous questions land managers are now asking. Doing the work outlined here will give research managers the initial data needed to allocate scarce research resources most effectively.

Approach: Forest production (yield and quality) and, often, the related benefits of water, wildlife, forage, and recreation, depend in a most basic way on the species, age, and stand density of the trees and the quality of the site. Species and age are easily determined; the quality of the site and the tree density that optimizes production are more difficult.

Techniques for relating site factors and stand density to productivity are available and generally applicable. However, because of the variable nature of soils and the many different tree species found in the U.S., it is difficult to transfer research results inter-regionally. Growth-site relationships must be determined for each specific region.

The availability of 449 tree growth plots in Sanders County and in the Lubrecht Experimental Forest

(University of Montana) provides an outstanding opportunity for research on growth-site relationships in areas representative of much of the Northern Rocky Mountains.

The research proposed here is designed to obtain preliminary answers to the following questions:

(1) What is the impact of tree density on wood production?

(2) What is the correlation between individual tree growth rate and wood quality?

(3) What soil factors, chemical or physical, influence rates of production?

(4) Can the Habitat Type approach to forest land classification be improved as a predictor of forest productivity by evaluation of soil variability within types?

Diversification in Rapid Growth Areas

Need: The region has abundant historical examples of rapid growth, subsequent decline, and social problems associated with boom towns. Often the growth within these areas can be traced to a single source — a mining operation, military base, energy facility, etc. And, when the facility is removed or becomes obsolete the community's economic base is largely eliminated — there is nothing else to support the area.

These communities may desire additional assistance in order to establish new forms of employment and income stability to help offset potential declines stemming from the primary industry. The proposed concept is to discuss, suggest, and investigate policy options which may contribute to dominant firms adding to the long-run stability of their areas — diversification through joint private/public sector cooperation. Typically, standard forms of public economic assistance have been somewhat unsuccessful in such cases. The responsible companies, however, may be successful in diversification, if properly motivated...through tax incentives and various easements and/or restrictions. Clearly, the likelihood of successful diversification efforts will be greater if it is in the company's best interest to do so.

Objectives: (1) to foster diversification in areas dominated by single source growth industries; (2) to investigate policy options which may contribute to diversification in company-town situations; and (3) to explore ways to increase business involvement in economic development activities.

Approach: Rapid growth areas, now feeling the strain of unusual expansion, will be reviewed. These communities will be selected based on the criteria of whether or not the growth was from a single source. On the basis of employment and income data (county level), no fewer than five test areas will be selected. Principal firms will be identified and case studies presented. This review is to include an estimate of the economic life of each facility.

The contractor, with the support of the Commission and each relevant state government, will discuss the extent of the problem with representatives of each firm. The primary focus of discussion will be on what the respective firms believe that they could accomplish to help diversify the economy and most importantly on the types of incentives that would be required to induce their cooperation, i.e., taxes, grants, etc. This information will be transmitted to the Commission to determine if the company's interest is sufficient to warrant further consideration. The Commission will review the information and make recommendations concerning whether or not it is in the interest of each state to pursue the concept further.

Economic Impact of Tourism

Need: Tourism is an important economic activity within all five states of the Old West Region. During the next year, the OWRC will begin to survey flows of tourism-related travel (origins and destinations) number of visitors, length of stay, and expenditure patterns. In order to utilize these data in a meaningful way, a procedure should be developed to estimate the economic importance of tourism (i.e., net income, employment, occupational make-up, etc.) for each state.

Objectives: The current survey will not address the question of economic impact. However, the proposed estimation system will, on the basis of the survey data, translate the information into common economic units to allow comparison with other sectors...agriculture, mining, manufacturing, etc.

Approach: Current methods for estimating the income and employment impacts of total tourism expenditures should be reviewed and an appropriate estimation system selected. The information generated by the survey may then be used to determine the overall significance of the industry within each state. The procedure should incorporate the primary expenditure data by type of purchase in such a way as to estimate the net income and employment effects of tourism by sector, i.e., restaurants, motels, retail trade, other services, etc.

It is expected that the contractor will rely heavily on Census data to convert total expenditures to income and employment terms. Other methods should be used to verify the estimates. These methods could include seasonality comparisons, minimum requirements, etc.

The final report is to include income and employment estimates by state and economic sector and a review and comparison of tourism estimation techniques currently used by each state. Variations in estimates and procedures should be discussed and improved updating techniques suggested.

Water Resource Analysis

Need: Water is the source of economic vitality to many economic sectors within the Old West Region. Montana, Wyoming, and North Dakota use water from a common source - the Yellowstone River Basin. This basin includes the Bighorn, Clark Fork, Powder, and Tongue River drainages. At present, there is no way to establish the amount of water being utilized by each state or for what purpose. The goal of the study is to determine the availability of water to each state in the Yellowstone River Compact.

Objectives: Article X of the compact prohibits diversion of water out of the Yellowstone Basin without the unanimous consent of the signatory states. The article has recently grown controversial because of Wyoming's interest in diverting water out of the basin for use by the energy industry. Montana's position at this time is to withhold approval of such diversions until the two states can agree on quantification of the percentages of tributary flows. Wyoming has published its estimates of these quantities, but Montana does not necessarily agree and intends to independently calculate its compact shares. North Dakota also has a quantifiable interest as a member of this compact. The proposed study would help resolve the issue.

Approach: Water right and use data (by type of use) will be collected and analyzed in order to provide an accounting mechanism for the current time frame. Long-term scenarios of water use — irrigation, municipal, energy, etc. — will be developed to help determine whether future shortages or overallocations by state are possible. Data collection will be from secondary sources only.

In addition to the final report, the contractor will present the results of the analysis to the Commission for its review and comment. The contractor will also suggest improved techniques (water accounting systems) for monitoring water use.

Landsat Demonstration Project

Need: The economy of the Old West Region is significantly affected by land management techniques and policies. Management of public resources — forests, grazing lands, and water — is often hampered by insufficient information. New techniques such as Landsat imagery and mapping may provide a useful means to fill these information gaps. Additionally, most states within the Old West region share this problem. Therefore, it is the intention of the Commission to review the state-of-the-art uses of new landuse information gathering procedures.

Objectives: New techniques such as Landsat often take years to develop to the point of practical application. Although the procedure has current potential, the potential is not fully understood. This project is expected to provide greater definition of appropriate and inappropriate uses of the present technology.

Approach: This study will focus on how Landsat may be used to gather data, the accuracy of the data, and how the system may be improved as a resource planning aid. Evaluation criteria will be developed to provide states with an improved understanding of the practical limits and advantages of the system. Current uses of the techniques within the Old West Region will be reviewed and summarized. In addition to the final report, the contractor will be required to present an in-depth seminar to describe the system capability to the technical staff of each state.

Commodity Transportation Planning

Need: The states of the Old West Region are far removed from national markets. In addition, a recent study by the U.S. Department of Commerce cites transportation as a primary determinant of industrial location and growth. Rail abandonment and possible deregulation of motor carriers may result in erosion of the region's long-run economic potential. Rising fuel prices and spot shortages contribute to the problem.

Objectives: The primary output of this study will be an improved understanding of alternative transportation potentials, the general feasibility of such alternatives, and the development of a working knowledge of the region's overall transportation network, i.e., how one mode impacts another. The effort is not intended to supplant existing state rail planning activities but to begin to broaden the scope of research to include other forms of transportation.

Approach: The costs of alternative transportation (commodity only) including rail, highway, air, and potentially water, will be evaluated in light of likely scenarios concerning the price of fuel, capital costs, maintenance, traffic density, etc. The analysis will take the form of a simulation process which would be used to isolate future problem areas, identify costs, and explore alternative possibilities... grain subterminal arrangements, piggyback and containers, canals, etc. The potential effects of federal policy should also be incorporated into the process.

Box Car Logistics

Need: Recurring box car shortages and insufficient short-term storage facilities disrupt the efficient flow of agricultural products (grain) out of the region. Given the importance of agricultural production within the Old West Region, there is a need to systematically evaluate if and how more expeditious movement of grain can be realized and at what expense.

Objectives: This study is designed to generate improved insight into the extent and magnitude of box car shortages, investigate the primary reasons for the problem and reveal those options open to the OWRC to effect greater efficiency. That is, what measures are available to influence the railroads and grain dealers (terminals) to achieve fewer bottlenecks.

Approach: Capital constraints (box cars), maintenance problems, storage limitations, and the logistics of box car movements will be analyzed to determine the impact of decreased "turn-around" time on the overall efficiency of the system. This quantitative investigation will focus on present bottlenecks which are the result of poor planning, as opposed to an actual lack of rail cars.

Numerous personal interviews with grain terminal associations (in each state), terminal operators, and railroad representatives should be necessary to condense the essence of the problem to a manageable level. On the basis of the interviews and of available secondary data, the contractor will investigate relevant options and alternatives which may help mitigate the problem. The study will result in a quantification of the problem and estimate the effects of alternative strategies necessary to resolve short-term capacity limitations in grain movement.

In addition to the final report, the contractor will be required to present the results of the study to the transportation technical advisory committee for their review and comment. The advisory committee will recommend policy alternatives to the Commission if appropriate.

Rural Medical Emergencies

Need: The Old West Region is well known for wide-open spaces and low population density. But, remoteness can occasionally result in human service delivery problems. Many residents within the region do not have ready access to advanced medical treatment centers. Automobile accidents, cardiac arrest, birth complications, etc., in rural areas may result in unnecessary loss of life and human suffering.

Objectives: The objective of the proposed study is to gain a more comprehensive assessment of rural health (emergency) systems and to suggest alternative measures in terms of reliability, costs and benefits and potential resistance.

Approach: Rural areas cannot afford modern facilities. However, modern delivery systems may be capable of providing residents with improved access to existing centers. Alternative possibilities include air service, communication links with specialists, paramedical professionals, etc. The full spectrum of possibilities will be explored, with respect to speed, quality, and potential costs or savings.

The contractor will work closely with health planning agencies in each state to ensure that state input is included in the analysis. It is also suggested that the contractor interview both private and public ambulance service providers to determine what (or whether) significant gaps in emergency service exist. There will be no attempt on the part of the Commission to supplant existing facilities (private and public). But, the study will focus on those areas which for one reason or another are not adequately serviced today. Recommendations will be made concerning the options open to provide improved services in such areas including the expected costs of new alternatives.

Community Health Care

Need: The Old West states have unique medical care needs. The numerous small towns and cities within the region are often not capable of realizing scale economies common in larger health care facilities. Community hospitals, day care centers, mental health centers, home health care organizations, and intermediate care facilities are all necessary and important. However, public resources are limited. Central record keeping, joint administra-

tion, and efficient utilization of equipment and buildings may reduce cost while maintaining quality care.

Objectives: The study will provide an improved understanding of common problems shared by independent health care organizations. An analysis of mutual problems may result in workable mechanisms which reduce overlapping costs, maintaining or perhaps even improving commmunity health care.

Approach: The potential for joint utilization of facilities, management, purchasing, and billing exists. This study will assess the problems and advantages of mutual arrangements in several pilot communities within the region, focusing on the possibility of sharing mutual overhead costs while maintaining the integrity of each program.

Two pilot communities will be selected by the contractor on the basis of community size (less than 15,000 population) and potential duplication of administrative services. The contractor will carefully review the administrative functions of the two test cases and recommend cost effective combinations of central record keeping, utilization of joint facilities, etc. In order to develop a workable scheme, it will be necessary that the contractor "work out" the exact details of the cooperative arrangement with the respective health care organizations in each community.

The primary thrust of the study will be to determine if such joint arrangements are practical from the standpoint of overall costs and personnel differences.

Crafts

Need: The Old West Region has abundant natural resources - hides, furs, lumber, metals, etc. — which may have the potential to support the development of cottage industries. The feasibility of manufacturing leather clothing, specialized furniture, fur coats, certain types of jewelry, and other related products should be investigated. Although employment in these types of enterprises is typically low, small scale firms are possibly more realistic for the region than the larger, more traditional forms of manufacturing.

Objectives: This feasibility study should provide private businessmen who may be interested in developing firms of this nature with valuable information regarding the costs, risks, and potential for development. Case studies of existing operations may be particularly useful.

Approach: The study would analyze the market potential for cottage industries which may utilize natural materials. Those products with the best potential would be discussed in terms of start-up costs, financing, marketing, etc. A review of present cottage industries will be conducted for each state to determine the viability of additional expansion. Case studies of related firms in other rural areas would also be provided.

PROPOSED STATE PROJECTS

The following programs constitute Montana's plan for the expenditure of state-level Old West Region Commission monies. Again, the proposed projects are the result of public input, agency input, and review by the Governor's Office.

Energy Research and Policy Analysis

Need: Recent shortages of diesel fuel and potential shortages of gasoline require continuous monitoring by state government. Although the state cannot single-handedly resolve its energy problems, it is imperative that decision makers within state government know the extent and magnitude of the problem in order to inform the public of the situation or implement legislative authority to help mitigate fuel shortages in emergency cases.

Objectives: Improved Montana-specific information and insight into the effects of federal policy, resulting in appropriate measures to be undertaken by the Governor's Office.

Approach: A full-time position within the Lieutenant Governor's Office will be funded in order to provide the Administration with up-to-date information and analysis of the energy picture. In addition, this professional assignment will include a review of energy monitoring methodologies, forecasting techniques, and federal regulation/policies which affect Montana's energy allocation and distribution systems, and its exploration and development potential.

Community Assistance

Need: Many Montana communities are justifiably confused by the massive array of federal assistance grants and projects. Explanation and simplification of existing federal programs, their eligibility criteria, requirements, and stipulations are necesary for the state's communities to make the best possible use of federal programs.

Objective: Better understanding by community leaders of existing federal programs which may be appropriate to their needs.

Approach: A manual, or potential user's guide, to community level program possibilities will be developed so that community leaders may better understand — in plain English — what programs are available and what is required in community involvement. This guide is to cover housing assistance, urban renewal, and economic development programs, as well as other topic areas relevant to Montana cities, towns, and counties.

Policy Input

Need: Industrial, agricultural, and environmental attitudes concerning economic issues often conflict. The Governor's Council of Economic Advisors, which represents a wide range of viewpoints, should be maintained as an important source of "non-governmental insight."

Objectives: Reconciliation of traditional and non-traditional views of major economic issues confronting Montana.

Approach: Fund quarterly meetings of the Council on current growth topics. To include only travel and per diem expenses for designated representatives.

Research

Need: Analysis and projections of economic activity play an important role within Administrative policy and the planning processes of government.

Objective: Improved economic planning within state government and analysis of existing conditions and trends.

Approach: Several research projects, of an applied nature, will be sponsored within the next fiscal year. These projects will include forecasting of various sectors, analysis of how proposed federal actions impact income and job security, and a review of economic conditions, issues, and possible policy alternatives.

SUMMARY

THE ROLE OF THE REGIONAL PLANNING COMMISSIONS

The five states comprising the Old West Region share many common issues and problems which can be effectively resolved through cooperative action. The pooling of technical and government resources may be in fact necessary to address some of the region's more pressing economic and social concerns.

Montana continues to fully support the function and significance of the Old West Regional Commission, an example of how well joint state and federal participation can work. Without doubt, much of this success can be attributed to the Commission's speed and flexibility in responding to important economic issues. But, a good program can become even better as the Commission actively strives toward:

— A more discriminating review of which projects and issues are worthy of OWRC assistance.

— Increased state involvement in proposing programs which more closely match the needs of their states and the region.

— A more conscientious approach to defining regional needs and a more concerted attempt to initiate projects which match those needs.

Public Investment Planning represents today a critical element, possibly even a cornerstone, to the function of government. The increasing complexity of economics has left behind the days of balance sheet decisions. Today, the prudent man, company, or community is the one that anticipates its role under changing conditions and moves in time to fill that role. Survival in the 1980s will not go to the immutable, but to the adaptable. This realization in itself may be the most important change of all, for in the past, survival was considered the reward for resisting changes.

Preparing for a new future, about which we can only be certain that it will be different, is a challenge to government's creativity. It is far more than adaptability. It will be a creative intelligence that will wrest the control of the future from chance.

MONTANA'S FUTURE

What, then, is the direction of Montana's economy? Montanans' individual efforts will determine the future. This will often involve painfully careful analysis and vigorously contested decisions if we are to grow in a balanced and reasonable way.

There will be many conflicts. Montanans must strive for growth which maintains the level of environmental and social qualities desired by the people. Montanans must identify areas suitable for increased growth and activity, taking into consideration the existing economic base, availability of materials and energy, labor market factors, transportation, market demand, and environmental quality. Montanans should foster our renewable resources such as forests, water, wildlife, and agriculture, under a concept of stewardship for future generations. If our alternatives are continually analyzed within the context of the "what" and "for whom" benchmarks, the overall welfare of our people will be enhanced.

Many crucial trade-offs will exist in the future. No simple solutions exist in such complex situations, but Montanans should make their input known to national decision makers when the health of the vital basic industries is at stake.

In keeping with the goal of open government and a healthy business environment, let us all work together — business and government — so that Montana in the future will be as it is today, healthy and prosperous: a good place to live. The Old West Regional Commission provides one, but an important, mechanism to insure our future will be balanced.

MONTANA MEMBERS
OLD WEST REGIONAL COMMISSION
ADVISORY COMMITTEES

Agriculture & Natural Resources

Keith Kelly
Gordon McOmber
Bob Simmons

Arts & Crafts

David Nelson
Francis Noel

Energy

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Tim Gallagher

Human Resources

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Bill Ikard

Industrial Development

Paul Bunn
Robert Kokaruda
John Lopach

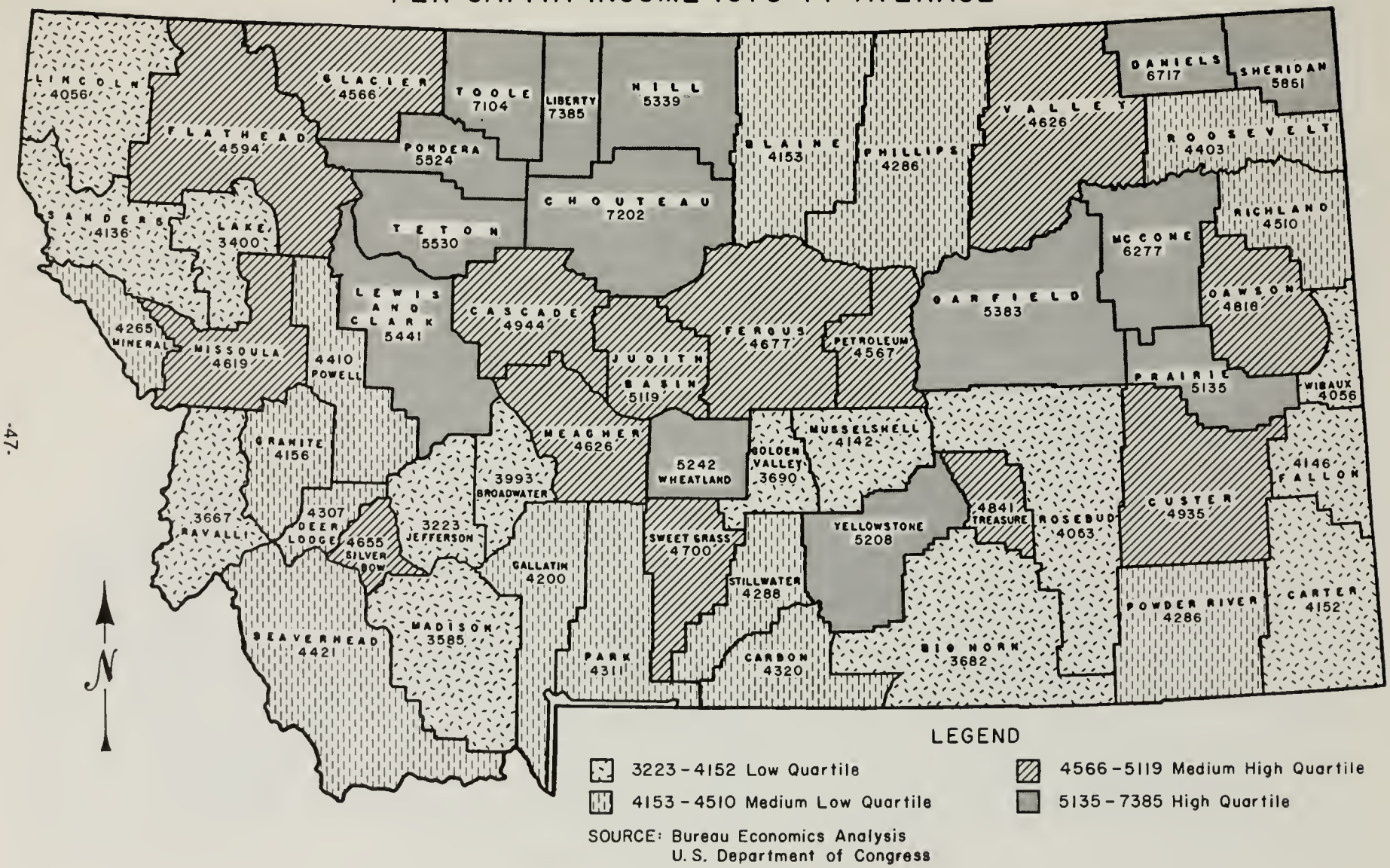
Tourism

Josephine Brooker
Ron Holliday
Bill Howell

Transportation

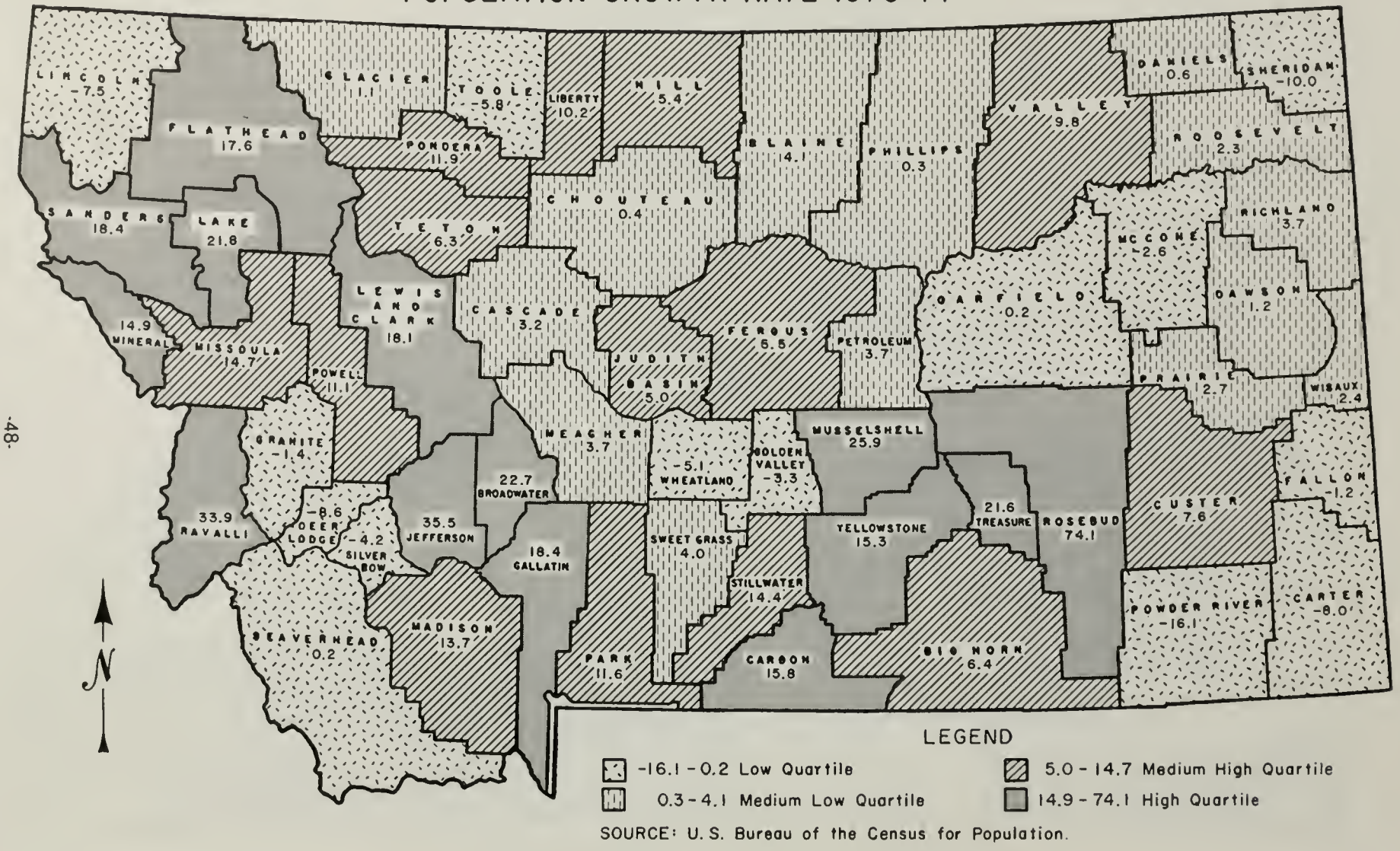
Wayne Budt
Ron Richards
Terry Whiteside

PER CAPITA INCOME 1970-77 AVERAGE



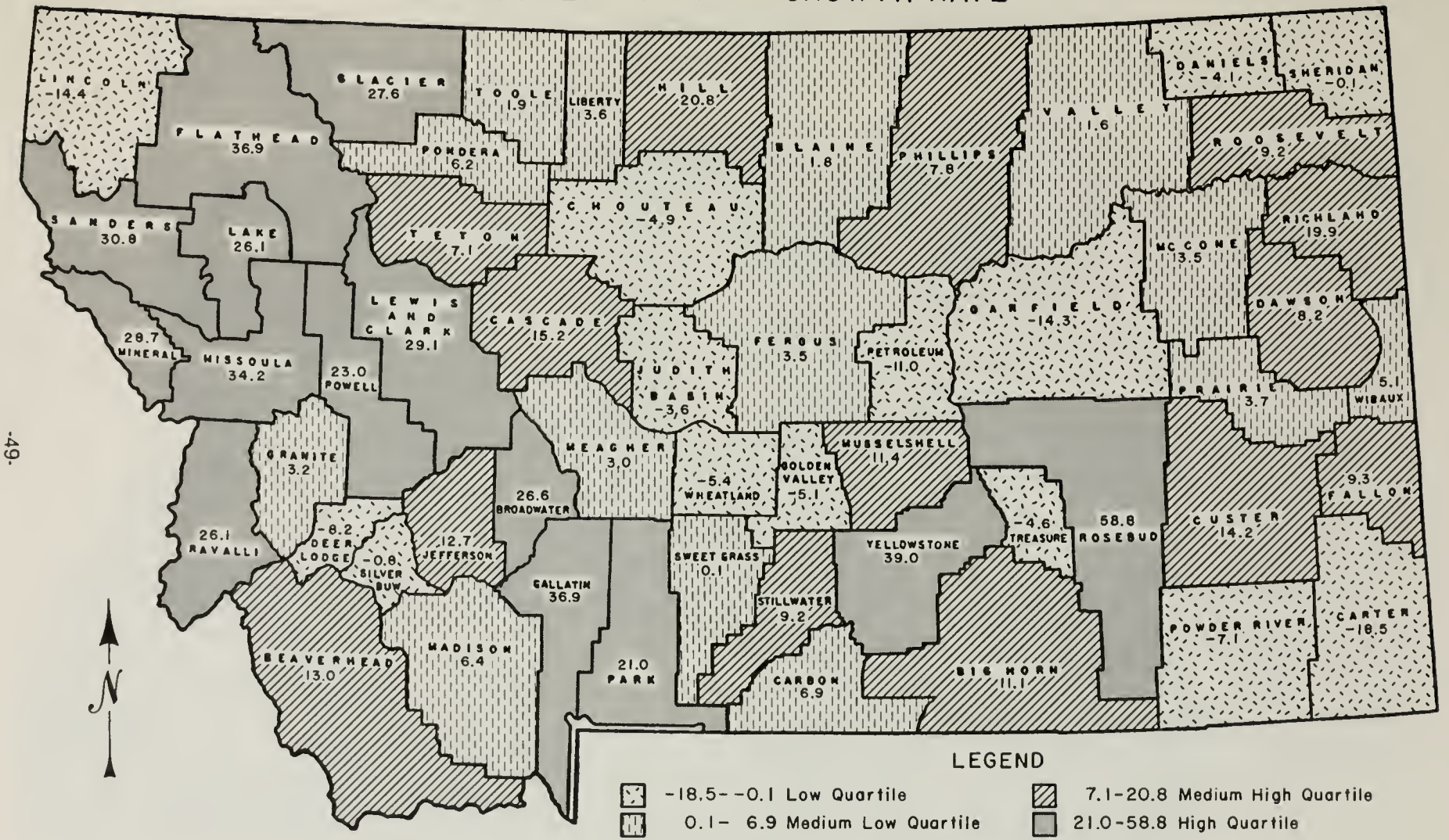
SOURCE: Bureau Economics Analysis
U. S. Department of Congress

POPULATION GROWTH RATE 1970-77



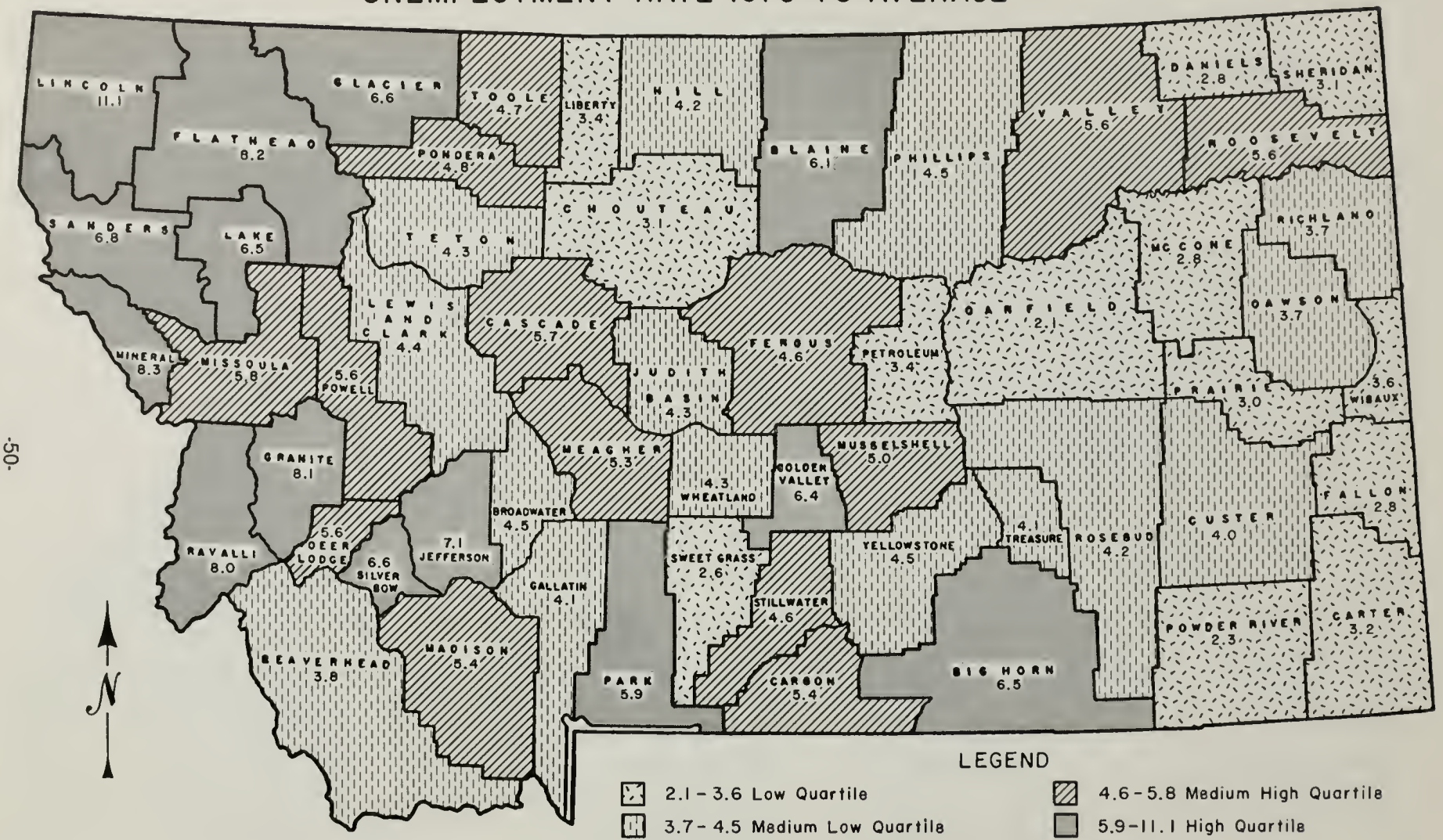
SOURCE: U. S. Bureau of the Census for Population.

EMPLOYMENT 1970-77 GROWTH RATE



SOURCE: Bureau Economics Analysis
U. S. Department of Congress

UNEMPLOYMENT RATE 1970-78 AVERAGE



SOURCE: Montana Department of Labor & Industry

STATE OF MONTANA/RECEIVED

APR 02 1980

DEPT. OF COMMUNITY AFFAIRS
RESEARCH & INFORMATION SYSTEMS DIV.

500 copies of this public document were published at an estimated cost of $2.29 per copy, for a total cost of $1,145.00 which includes $870.00 for printing and $275.00 for distribution.

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Printed by
COLOR WORLD OF MONTANA, INC.
201 E. Mendenhall, Bozeman, MT 59715